



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

May 31, 2004

US Army Corps of Engineers
Raleigh Regulatory Field Office
6508 Falls of the Neuse Road, Suite 120
Raleigh, North Carolina 27615

ATTENTION: Mr. Eric Alsmeyer
NCDOT Coordinator

Dear Mr. Alsmeyer:

Subject: **Nationwide 23 application**, for the replacement of Bridge No. 140 on Southbound US 29/70, I-85 Business over Rich Fork Creek, Davidson County. Federal Aid Project No. BRSTP-29(20), State Project No. 81602101, NCDOT Division 9, TIP Project No. B-4096, WBS Element 33454.1.1.1.

Please find enclosed three copies of the CE, permit drawings and ½ size plans for the above referenced project. The document states that the existing two lane bridge on Southbound US 29/70, I-85 Business will be replaced with a new two lane 230-foot long bridge on the existing alignment. Traffic will use an onsite one lane detour structure located northwest of the existing structure during construction. No additional impacts will occur as a result of the detour. The proposed temporary cross over detour will remain in place after the southbound bridge has been built to be used for the future north bound bridge replacement project. There are permanent impacts to Waters of the U.S. associated with this project. There are no impacts to Rich Fork Creek. Impacts to wetlands are permanent and consist of 0.03 acres of fill. Rich Fork Creek is classified by the Division of Water Quality as Class C.

Impacts to Waters of the U.S.

Demolition: Bridge No. 140 is composed of reinforced concrete with an asphalt wearing surface. The bridge asphalt wearing surface can be removed without dropping components into Waters of the United States. There is potential for components of the bridge to be dropped into waters of the U.S. The resulting temporary fill associated with the concrete bridge is approximately 150 cubic yards. All guidelines for bridge

demolition and removal will be followed in addition to Best Management Practices for the Protection of Surface Waters and BMP's for Bridge Demolition and Removal.

Avoidance, Minimization, and Mitigation

The NCDOT is committed to incorporating all reasonable and practicable design features to avoid and minimize wetland impacts, and to provide full compensatory mitigation of all remaining wetland impacts. Avoidance measures were taken during the planning and NEPA phases; minimization measures were incorporated as part of the project design and include:

- In order to minimize impacts to Rich Fork Creek, no bents will be placed in the water.

No mitigation is proposed because wetland impacts do not exceed the 0.10-acre threshold.

Federally Protected Species

Plants and animals with federal classifications of Endangered, Threatened, Proposed Endangered, and Proposed Threatened are protected under provisions of Section 7 and Section 9 of the Endangered Species Act of 1973, as amended. As of January 29, 2003, the Fish and Wildlife Service (FWS) lists three federally protected species for Davidson County, Schweinitz's sunflower, bald eagle and the bog turtle.

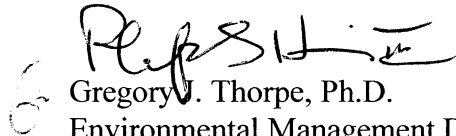
The bog turtle is listed as threatened due to similarity of appearance and therefore does not require a biological conclusion. A biological conclusion of "No Effect" was reached for the Bald Eagle and the Schweinitz's sunflower as reflected in the attached CE dated January 2002. No habitat is in the project area for the bald eagle, however there is habitat for the Schweinitz's sunflower. Updated surveys for the Schweinitz's sunflower were conducted by NCDOT biologists on August 14, 2003 to ensure that no individuals were present

Regulatory Approvals

This project is being processed by the Federal Highway Administration as a "Categorical Exclusion" in accordance with 23 CFR 771.115(b). Therefore, we do not anticipate requesting an individual permit but propose to proceed under a Nationwide 23 in accordance with 67 FR 2020, 2082, Jan 15, 2002. We anticipate a 401 General Certification number 3361 will apply to this project and will adhere to the general conditions of WQC 3361. In accordance with 15A NCAC 2H .0501(a) we are providing two copies of this application to the North Carolina Department of Environment and Natural Resources, Division of Water Quality, for their records.

If you have any questions or need additional information, please contact Brett Feulner at (919) 715-1488.

Sincerely,


Gregory J. Thorpe, Ph.D.
Environmental Management Director, PDEA

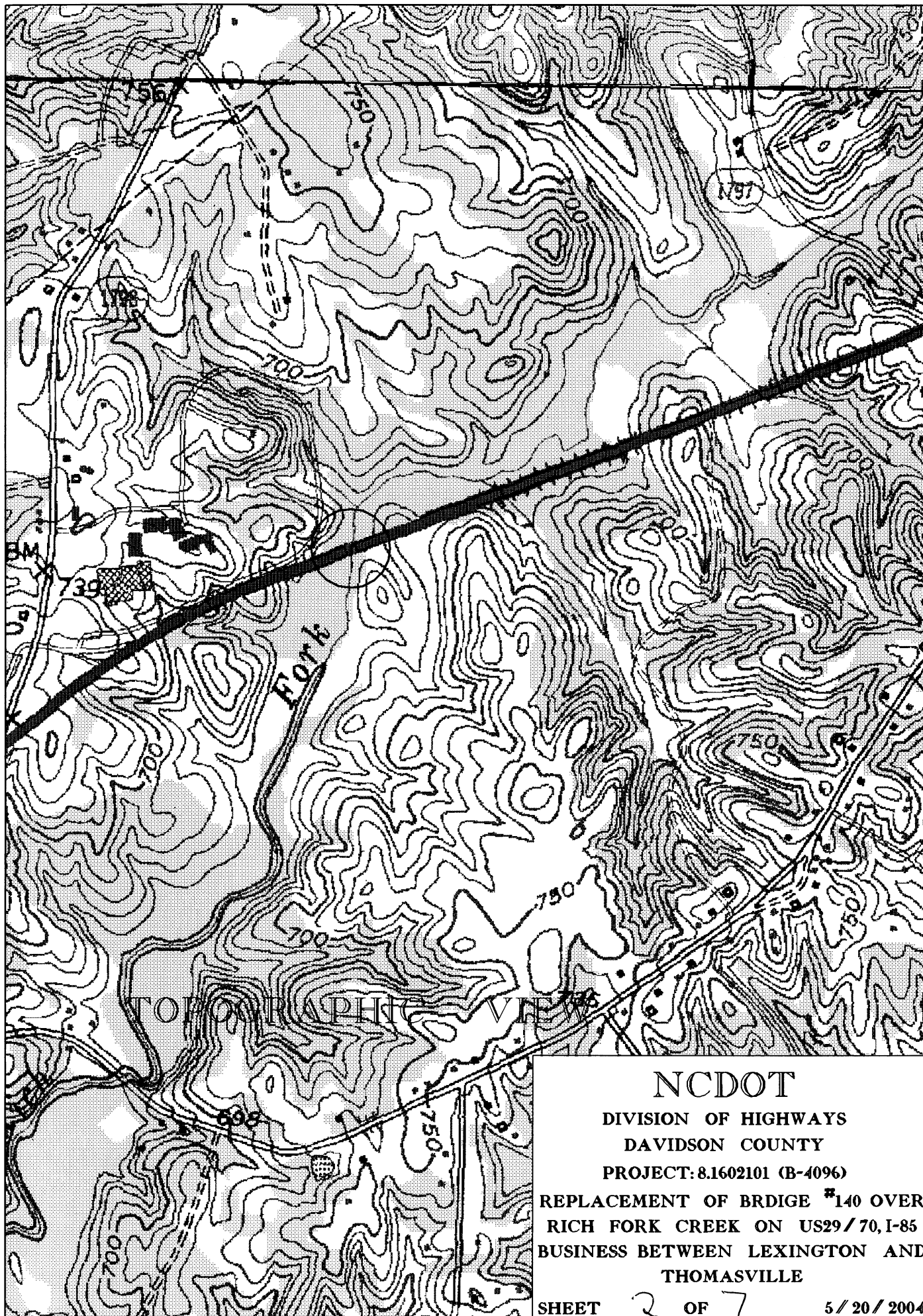
Cc:

w/ attachment:

Mr. John Hennessy, NC Division of Water Quality (2 copies)
Mr. Marla Chambers, NCWRC
Mr. Marella Buncick, USFWS
Mr. Greg Perfetti, P.E., Structure Design

w/o attachment

Mr. David Franklin, USACE, Wilmington
Mr. Jay Bennett, P.E., Roadway Design
Mr. Omar Sultan, Programming and TIP
Mr. Art McMillan, PE, Highway Design
Mr. David Chang, P.E., Hydraulics
Ms. Mark Staley, Roadside Environmental
Mr. John F. Sullivan, III, FHWA
Mr. S.P. Ivey, P.E., Division 9 Engineer
Ms. Diane Hampton, DEO
Mr. Joel Johnson, Project Planning Engineer



NCDOT

**DIVISION OF HIGHWAYS
DAVIDSON COUNTY**

PROJECT: 8.1602101 (B-4096)

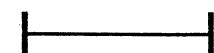
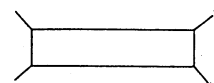
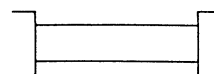
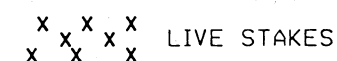
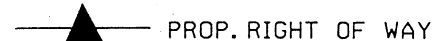
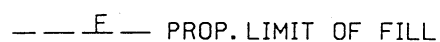
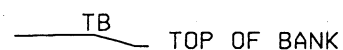
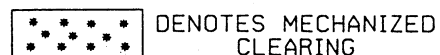
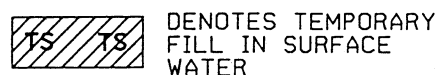
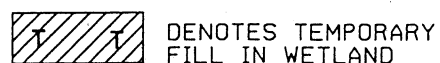
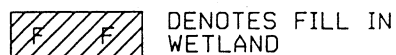
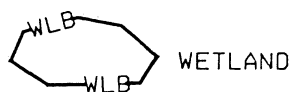
**REPLACEMENT OF BRIDGE #140 OVER
RICH FORK CREEK ON US29/70, I-85
BUSINESS BETWEEN LEXINGTON AND
THOMASVILLE**

SHEET 2 OF 7

5/20/2004

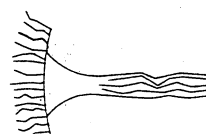
WETLAND LEGEND

— WLB — WETLAND BOUNDARY

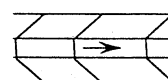
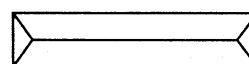


(DASHED LINES DENOTE EXISTING STRUCTURES)

12"-48" PIPES
54" PIPES & ABOVE



ROOTWAD



NCDOT

DIVISION OF HIGHWAYS

DAVIDSON COUNTY

PROJECT: 8.1602101 (B-4096)

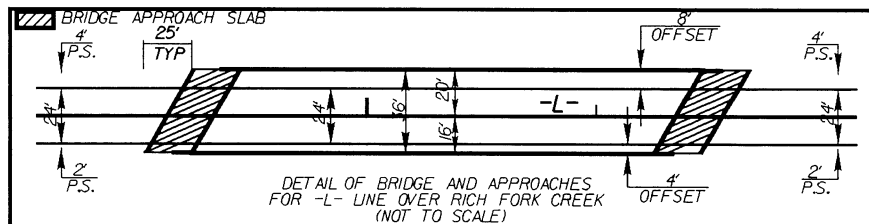
REPLACEMENT OF BRIDGE #140 OVER
RICH FORK CREEK ON US 29/70, I-85
BUSINESS BETWEEN LEXINGTON, N.C.
AND THOMASVILLE, N.C.

SHEET 3 OF 7 10/21/03

8/17/99

PROJECT REFERENCE NO.		SHEET NO.	
B-4096		4	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<div><div>PRELIMINARY PLANS</div><div>DO NOT USE FOR CONSTRUCTION</div></div>			

Sheet 4 of 7

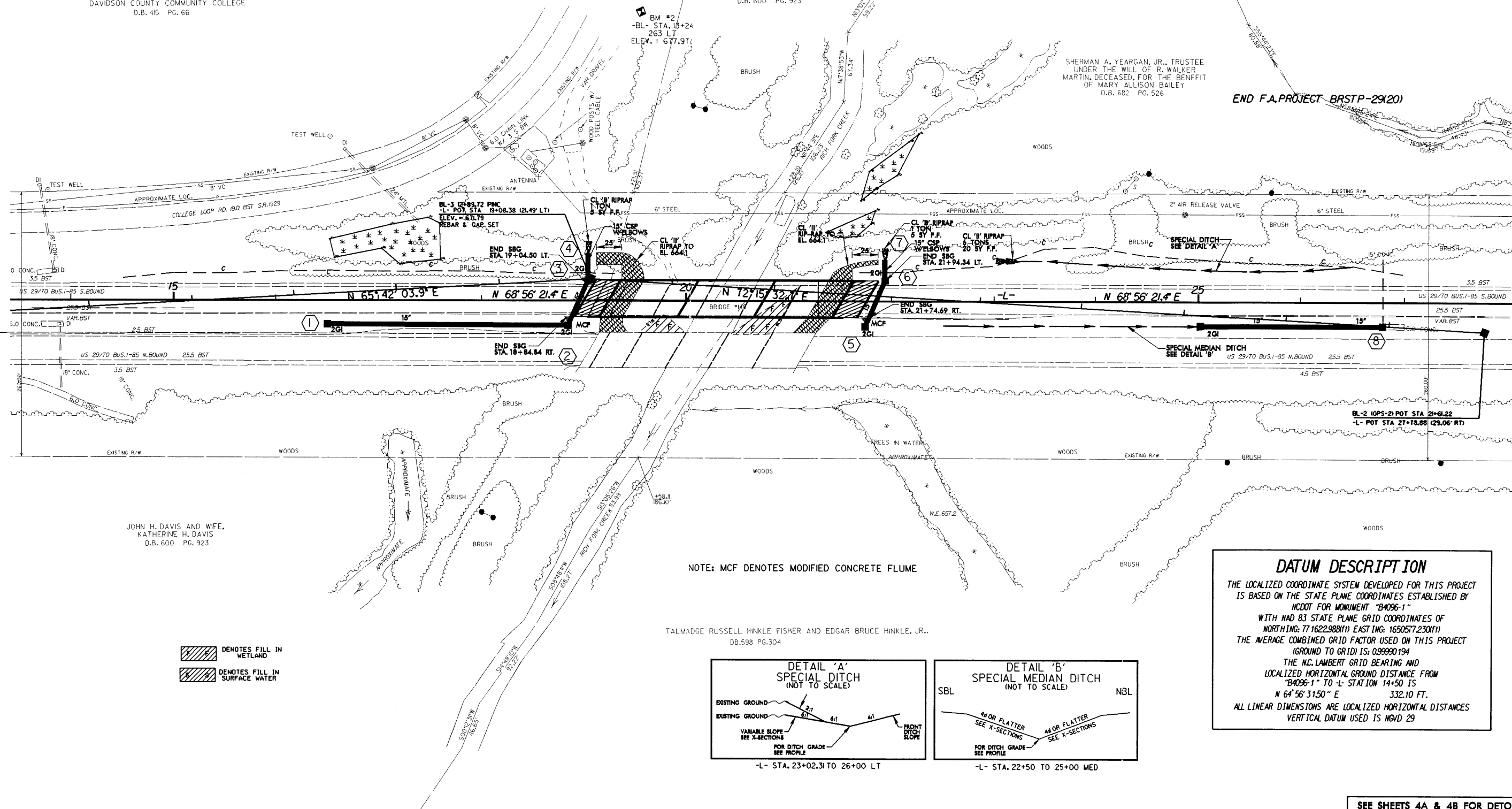


DAVIDSON COUNTY COMMUNITY COLLEGE
D.B. 415 PG. 66

JOHN H. DAVIS AND WIFE,
KATHERINE H. DAVIS
D.B. 600 PG. 923

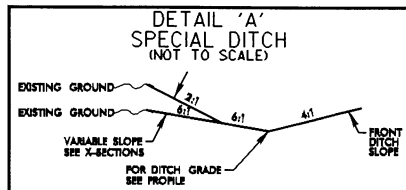
SHERMAN A. YEARGAN, JR., TRUSTEE
UNDER THE WILL OF R. WALKER
MARTIN, DECEASED, FOR THE BENEFIT
OF MARY ALLISON BAILEY
D.B. 682 PG. 526

END F.A. PROJECT BRSTP-29(20)

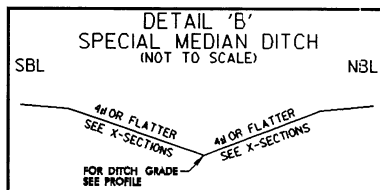


NOTE: MCF DENOTES MODIFIED CONCRETE FLUME

TALMADGE RUSSELL HINKLE FISHER AND EDGAR BRUCE HINKLE, JR..
DB.598 PG.304



-L- STA. 23+02.31 TO 26+00 LT



-L- STA. 22+50 TO 25+00 MED

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY MCDOT FOR MONUMENT "B4096-1" WITH NAD 83 STATE PLANE GRID COORDINATES OF NORTHING: 771622988(1) EASTING: 165057230(1) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99990194 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4096-1" TO -L- STATION 14+50 IS N 64° 56' 31.50" E 332.10 FT. ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NGVD 29

SEE SHEETS 4A & 4B FOR DETOUR
SEE SHEET 5 FOR PROFILE

20-MAY-2004 15:24
R:\Hydraulics\B4096.drn.dgn
pelam

5/28/99

BM-2 R/R SPIKE IN BASE OF 18" OAK
42' OFF EASTERN EP ON COLLEGE LOOP RD.
NORTH OF SEWAGE PUMP STATION
263' LT OF -BL- STA. 13+24 (-L- STA.
19+56.19 OFF 243.81' (LT))
ELEV. = 677.97



BRIDGE HYDRAULIC DATA

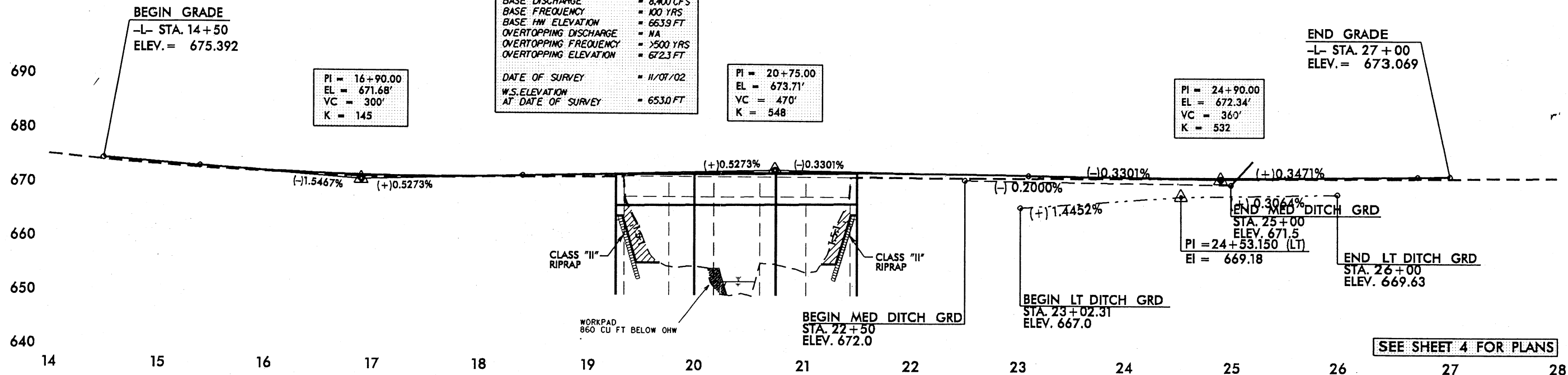
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DESIGN FREQUENCY = 50 YRS
DESIGN HW ELEVATION = 6631 FT
BASE DISCHARGE = 8,400 CFS
BASE FREQUENCY = 100 YRS
BASE HW ELEVATION = 6639 FT
OVERTOPPING DISCHARGE = NA
OVERTOPPING FREQUENCY = 500 YRS
OVERTOPPING ELEVATION = 6723 FT

DATE OF SURVEY = 11/01/02
W.S. ELEVATION AT DATE OF SURVEY = 6530 FT

PI = 20+75.00
EL = 673.71'
VC = 470'
K = 548

PI = 16+90.00
EL = 671.68'
VC = 300'
K = 145

PI = 24+90.00
EL = 672.34'
VC = 360'
K = 532



PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.

NAMES

ADDRESSES

All Impacts to wetlands and streams are NCDOT right of way.

NCDOT

DIVISION OF HIGHWAYS

DAVIDSON COUNTY

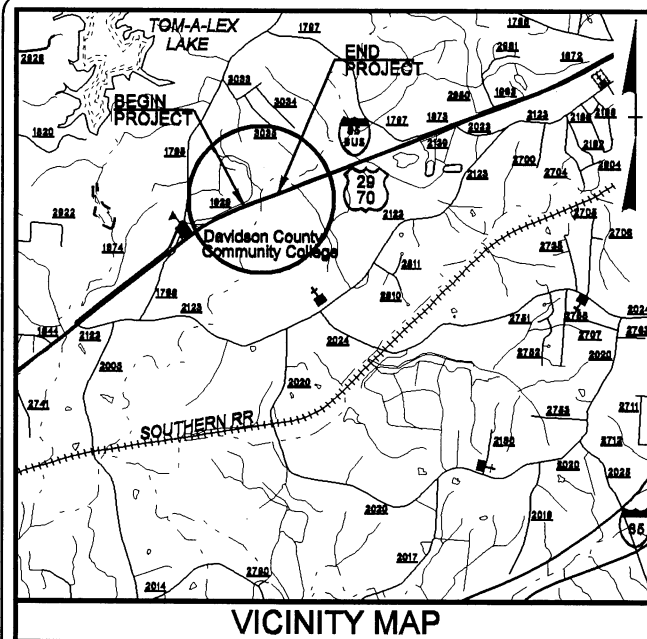
PROJECT: 8.1602101 (B-4096)

REPLACEMENT OF BRIDGE[#]140 OVER
RICH FORK CREEK ON US 29/70, I-85
BUSINESS BETWEEN LEXINGTON, N.C.
AND THOMASVILLE, N.C.

SHEET 6 OF 7

10/21/03

CONTRACT: TIP PROJECT: B-4096



VICINITY MAP

See Sheet 1-A For Index of Sheets

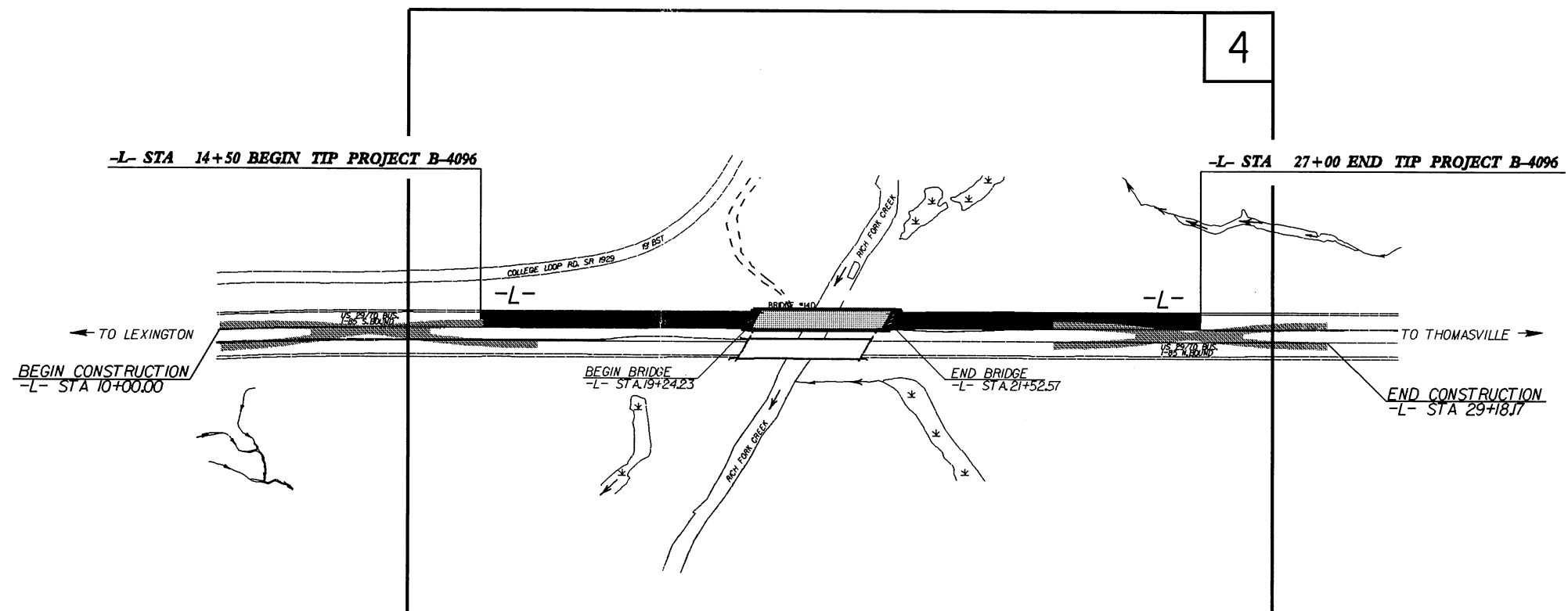
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

DAVIDSON COUNTY

LOCATION: BRIDGE 140 OVER RICH FORK CREEK ON
US 29-70/I-85 BUSINESS

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE

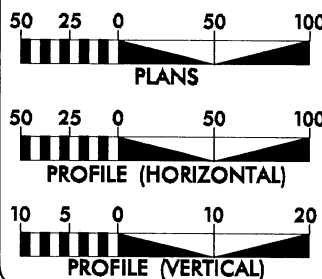
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4096	1	
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
33454.1.1	BRSTP-29(20)	PE	
33454.3.1	BRSTP-29(20)	R/W	
33454.2.2	BRSTP-29(37)	CONST.	



THIS IS A CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES



DESIGN DATA

ADT 2004 = 23,600
ADT 2025 = 37,500
DHV = 10 %
D = 60 %
T = 16 % *
V = 60 MPH
* TTST 10% DUALS 6 %
FUNCTIONAL CLASSIFICATION
RURAL MINOR ARTERIAL

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT B-4096 = 0.193 MILES
LENGTH OF STRUCTURE TIP PROJECT B-4096 = 0.044 MILES
TOTAL LENGTH OF TIP PROJECT B-4096 = 0.237 MILES

Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., NC, 27610

2001 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
NOVEMBER 24, 2003

LETTING DATE:
NOVEMBER 16, 2004

G. E. BREW, PE
PROJECT ENGINEER

I. T. YOUNIS
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.
ROADWAY DESIGN
ENGINEER

SIGNATURE: _____ P.E.

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

STATE DESIGN ENGINEER
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR DATE

PROJECT REFERENCE NO.		SHEET NO.	
B-4096		2-A	
ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER	

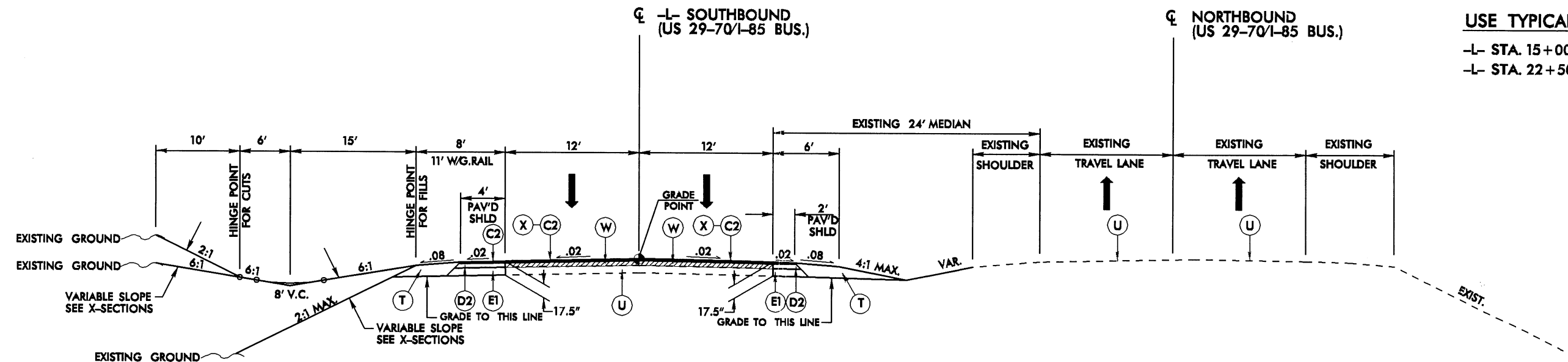
PRELIMINARY PLANS

DO NOT USE FOR CONSTRUCTION

C1	2½" S9.5B
C2	3" S9.5C
D1	4" I19.0B
D2	4" I19.0C
E1	10½" B25.0C
J	8" ABC
T	EARTH
U	EXIST.

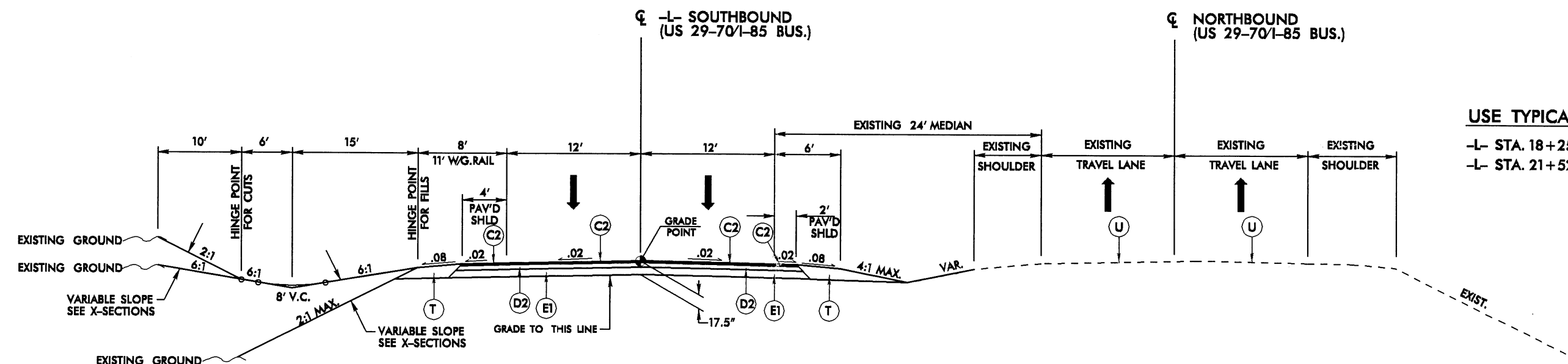
USE TYPICAL SECTION NO. 2

-L- STA. 15+00 TO 18+25
-L- STA. 22+50 TO 26+50



TYPICAL SECTION NO. 2

NOTE: OVERLAY EXISTING PAVED SHOULDERS WITH 3" OF S9.5C. IF IT IS FOUND DURING CONSTRUCTION THAT THE EXISTING SHOULDERS ARE NOT FULL DEPTH, REPLACE THE SHOULDERS AND USE THE MAINLINE FULL DEPTH PAVEMENT DESIGN.

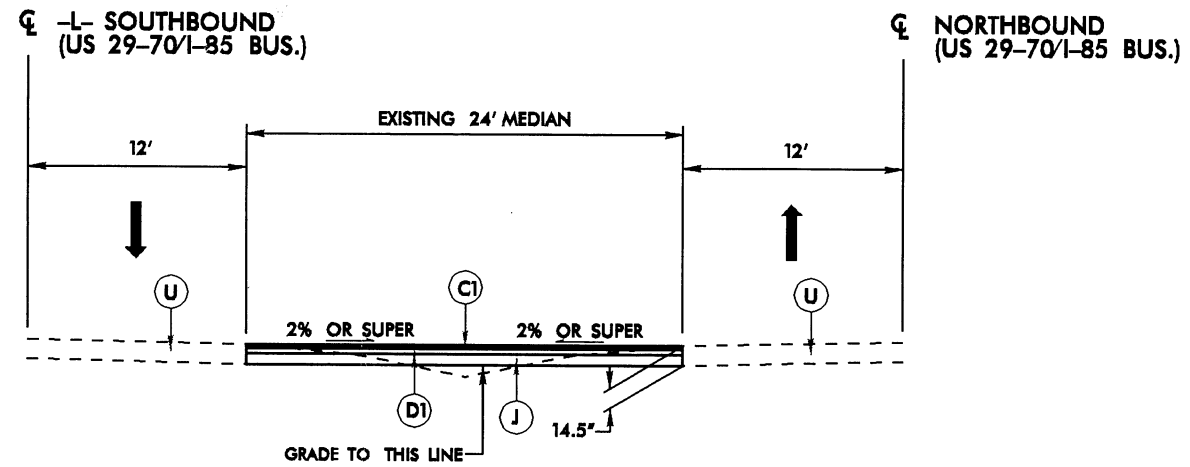


TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3

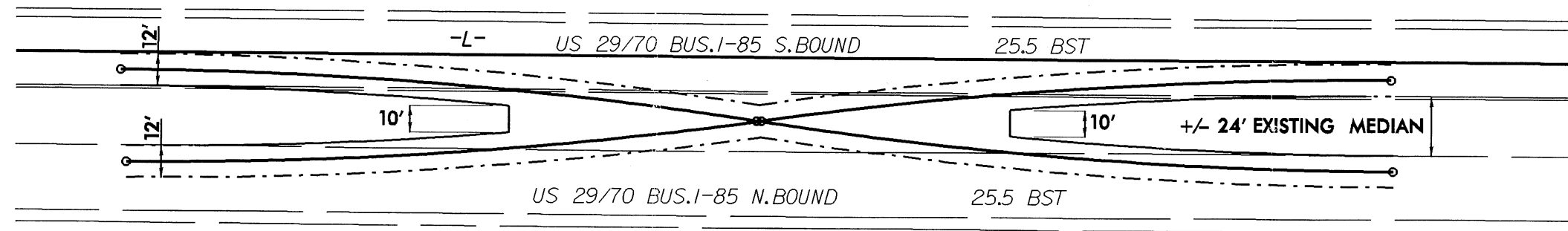
-L- STA. 18+25 TO 19+24.23
-L- STA. 21+52.57 TO 22+50

PROJECT REFERENCE NO.	SHEET NO.
B-4096	2-B
ROADWAY DESIGN ENGINEER	PAYMENT DESIGN ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



TEMPORARY HOUR GLASS DESIGN

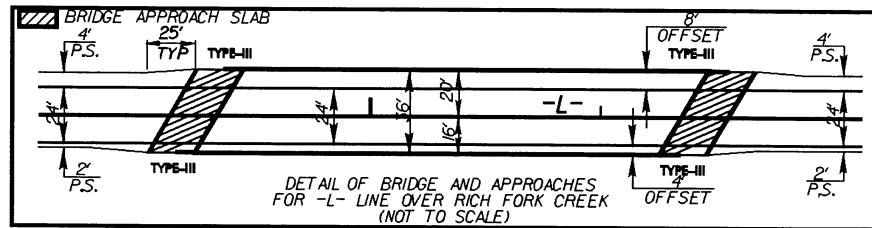
- DETA- STA 10+00.00 TO 15+49.91
- DETB- STA 10+00.00 TO 14+54.44
- DETC- STA 24+41.55 TO 29+18.17
- DETD- STA 24+41.55 TO 29+18.16



DETAIL OF DETOUR A,B,C AND D

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
B-4096	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



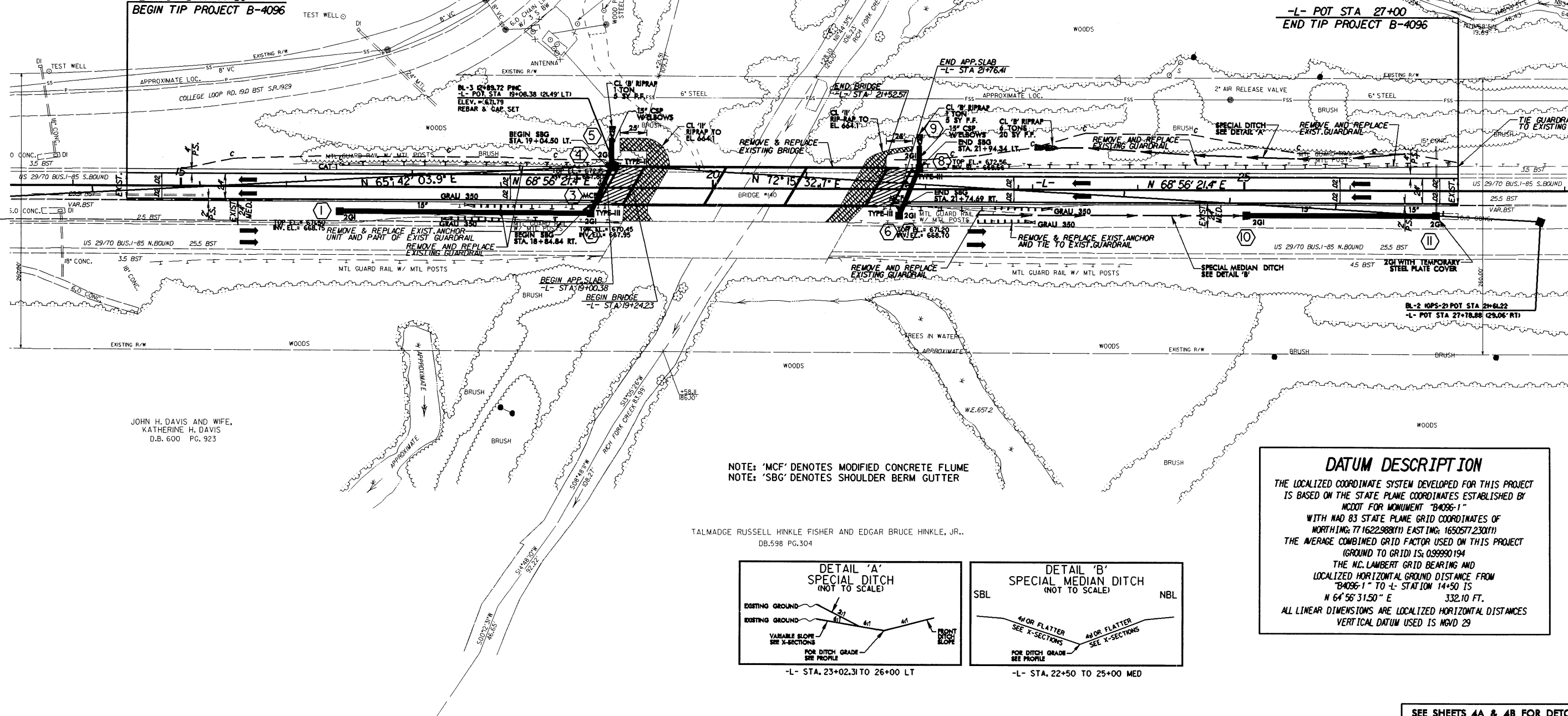
DAVIDSON COUNTY COMMUNITY COLLEGE
D.B. 415 PG. 66

JOHN H. DAVIS AND WIFE,
KATHERINE H. DAVIS
D.B. 600 PG. 923

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UNDER THE WILL OF R. WALKER
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D.B. 682 PG. 526

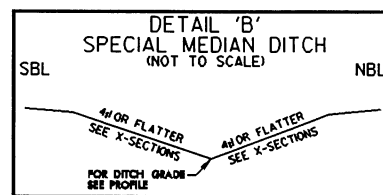
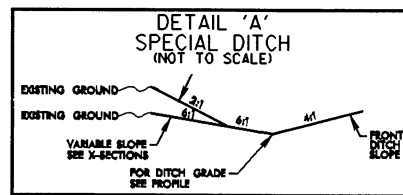
-L- POT STA 14+50
BEGIN TIP PROJECT B-4096

-L- POT STA 27+00
END TIP PROJECT B-4096



NOTE: 'MCF' DENOTES MODIFIED CONCRETE FLUME
NOTE: 'SBG' DENOTES SHOULDER BERM GUTTER

TALMADGE RUSSELL HINKLE FISHER AND EDGAR BRUCE HINKLE, JR.,
DB.598 PG.304

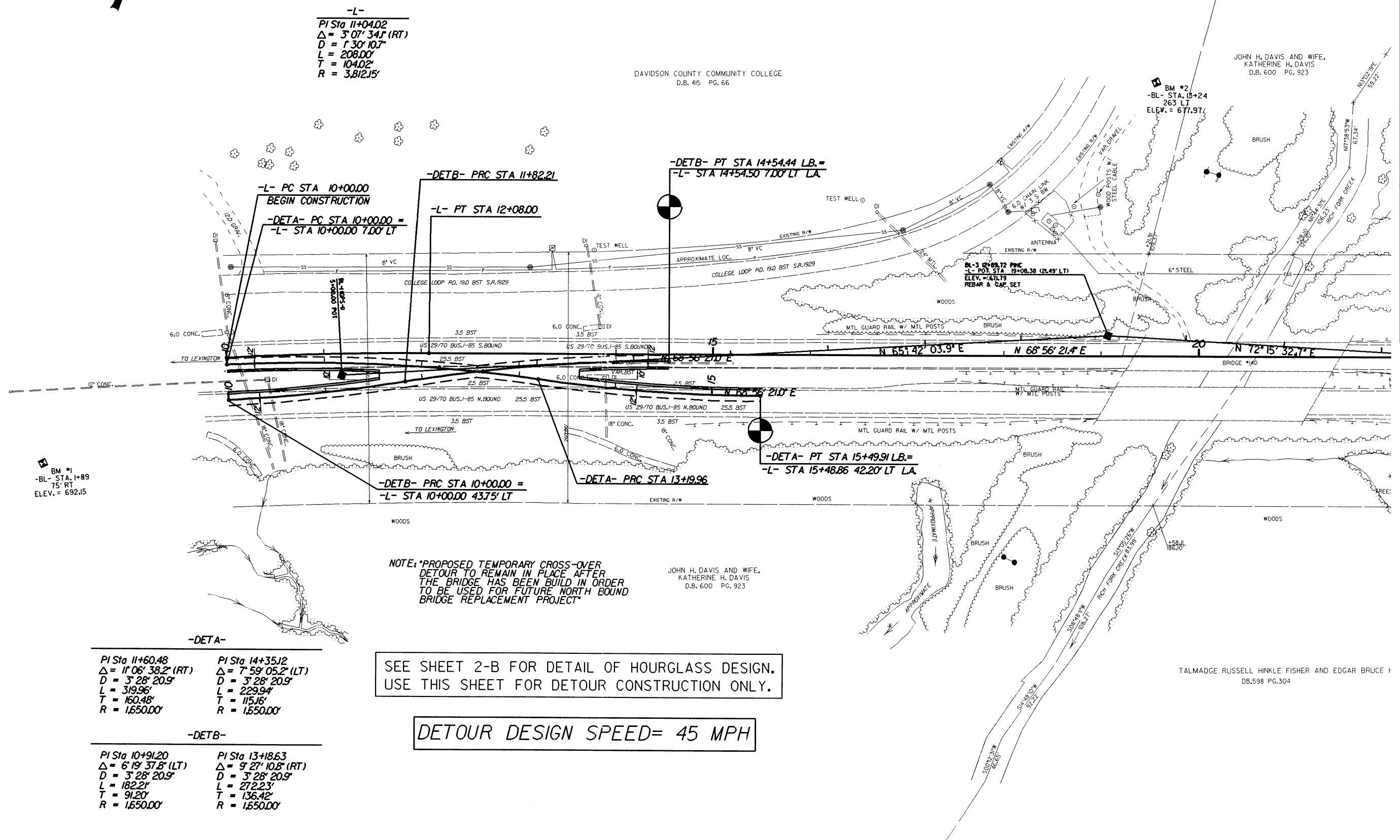


DATUM DESCRIPTION
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IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY
MCDOT FOR MONUMENT "B4096-1"
WITH NAD 83 STATE PLANE GRID COORDINATES OF
NORTHING: 771622988(11) EASTING: 1650577230(11)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT
(GROUND TO GRID) IS: 0.99990194
THE N.C. LAMBERT GRID BEARING AND
LOCALIZED HORIZONTAL GROUND DISTANCE FROM
"B4096-1" TO -L- STATION 14+50 IS
N 64°56'31.50" E 332.10 FT.
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS MVD 29

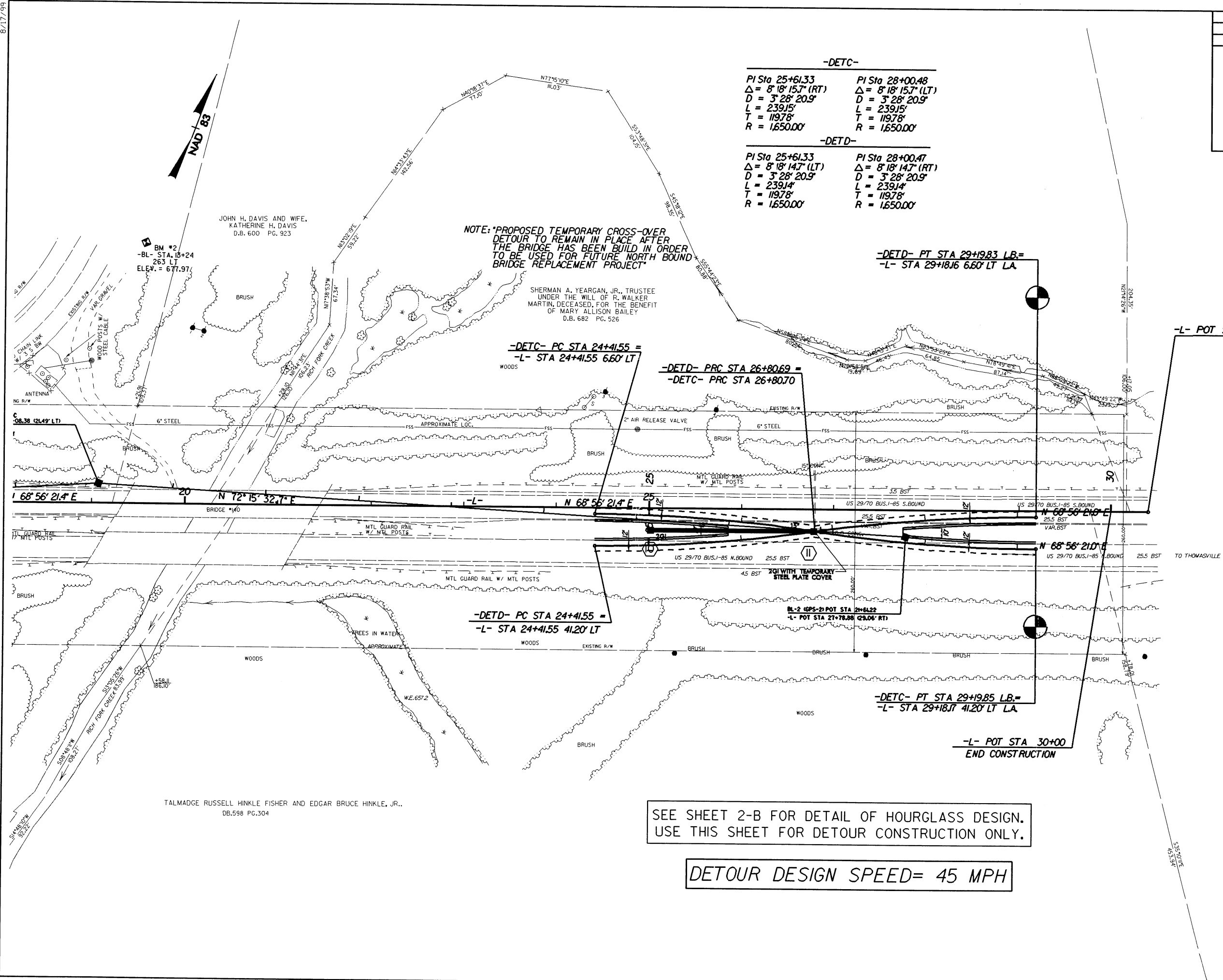
SEE SHEETS 4A & 4B FOR DETOUR
SEE SHEET 5 FOR PROFILE

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psh4

PROJECT REFERENCE NO.	SHEET NO.
B-4096	4-A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



PROJECT REFERENCE NO.	SHEET NO.
B-4096	4-B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



-DETC-	
PI Sta 25+61.33	PI Sta 28+00.48
$\Delta = 8' 18' 15.7''$ (RT)	$\Delta = 8' 18' 15.7''$ (LT)
D = 3' 28' 20.9"	D = 3' 28' 20.9"
L = 239.15'	L = 239.15'
T = 119.78'	T = 119.78'
R = 1650.00'	R = 1650.00'
-DETD-	
PI Sta 25+61.33	PI Sta 28+00.47
$\Delta = 8' 18' 14.7''$ (LT)	$\Delta = 8' 18' 14.7''$ (RT)
D = 3' 28' 20.9"	D = 3' 28' 20.9"
L = 239.14'	L = 239.14'
T = 119.78'	T = 119.78'
R = 1650.00'	R = 1650.00'

-DETC- PC STA 24+41.55 =
-L- STA 24+41.55 6.60' LT

-DETD- PRC STA 26+80.69 =
-DETC- PRC STA 26+80.70

-DETD- PC STA 24+41.55 =
-L- STA 24+41.55 41.20' LT

-DETD- PT STA 29+19.83 LB.=
-L- STA 29+18.16 6.60' LT LA

-DETC- PT STA 29+19.85 LB.=
-L- STA 29+18.17 41.20' LT LA

-L- POT STA 30+00
END CONSTRUCTION

-L- POT STA 30+40.23

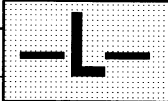
8/17/99

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5/28/99

PROJECT REFERENCE NO.		SHEET NO.	
B-4096		5	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			

BM-2 RR SPIKE IN BASE OF 18" OAK
42' OFF EASTERN EP ON COLLEGE LOOP RD.
NORTH OF SEWAGE PUMP STATION
263' LT OF -BL- STA. 13+24 (-L- STA.
19+56.19 OFF 243.81' (LT))
ELEV. = 677.97



BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 7,000 CFS
DESIGN FREQUENCY	= 50 YRS
DESIGN HW ELEVATION	= 663.1 FT
BASE DISCHARGE	= 8,400 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 663.9 FT
OVERTOPPING DISCHARGE	= NA
OVERTOPPING FREQUENCY	= >500 YRS
OVERTOPPING ELEVATION	= 672.3 FT
DATE OF SURVEY	= 11/07/02
W.S. ELEVATION AT DATE OF SURVEY	= 653.0 FT

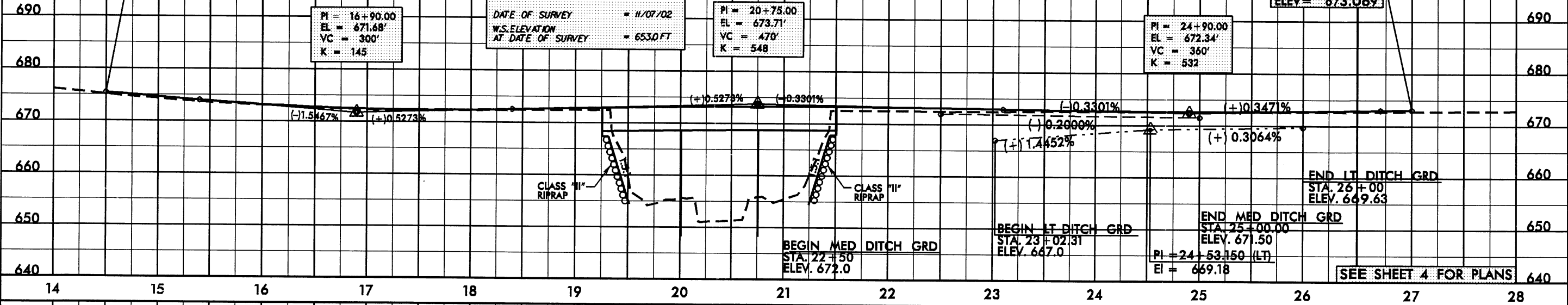
BEGIN GRADE
-L- STA 14+50
ELEV = 675.392

PI = 16+90.00
EL = 671.68'
VC = 300'
K = 145

PI = 20+75.00
EL = 673.71'
VC = 470'
K = 548

PI = 24+90.00
EL = 672.34'
VC = 360'
K = 532

END GRADE
-L- STA 27+00
ELEV = 673.069



SEE SHEET 4 FOR PLANS

Davidson County
Bridge No. 140 on Southbound US 29/70, I85 Bus.
over Rich Fork Creek
Federal Aid Project No. BRSTP-29(20)
State Project No. 8.1602101
T.I.P. No. B-4096

CATEGORICAL EXCLUSION

UNITED STATES DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

AND

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

APPROVED:

1-11-02

DATE

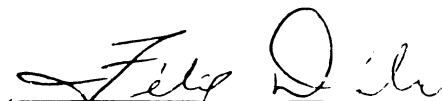


William D. Gilmore, PE, Manager

Project Development and Environmental Analysis Branch, NCDOT

1-15-02

DATE



for Nicholas L. Graf, PE

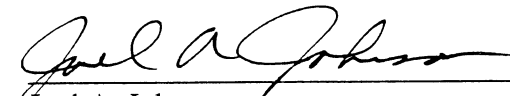
Division Administrator, FHWA

Davidson County
Bridge No. 140 on Southbound US 29/70, I85 Bus.
over Rich Fork Creek
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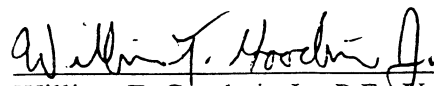
CATEGORICAL EXCLUSION

Documentation Prepared in
Project Development and Environmental Analysis Branch By:

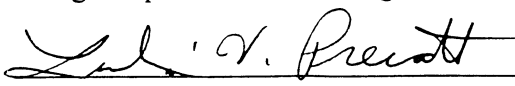
1-11-02
DATE


Joel A. Johnson
Project Development Engineer

1-11-02
DATE


William T. Goodwin Jr., P.E., Unit Head
Bridge Replacement Planning Unit

1-11-02
DATE


Lubin V. Prevatt, P.E., Assistant Manager
Project Development & Environmental Analysis Branch

PROJECT COMMITMENTS

Replacement of Bridge No. 140
on Us 29/70 & I-85 Bus. over Rich Fork Creek
Davidson County
Federal-Aid No. BRSTP-29(20)
State Project No. 8.1602101
TIP. No. B-4096

Commitments Developed Through Project Development and Design

Division 9 Resident Engineer/Roadside Environmental Unit/Structure Design Unit/Roadway Design Unit

Bridge Demolition:

NCDOT will adhere to the Best Management Practices (BMPs) for “Bridge Demolition and Removal” during the removal of Bridge No. 140. Bridge No. 140 is composed entirely of reinforced concrete with an asphalt wearing surface. The asphalt wearing surface can be removed without dropping into waters of the United States. There is a potential for components of the bridge to be dropped into waters of the United States during construction. The resulting temporary fill associated with the concrete bridge is approximately 150 cubic yards (115 cubic meters).

Turbidity Curtains:

Conditions in the stream will raise sediment concerns and therefore a turbidity curtain is recommended as a preventative measure.

Revegetation:

The temporary detour structure and approaches will be removed after the new bridge is completed, and the area will be revegetated with appropriate plant species.

Davidson County
Bridge No. 140 on Southbound US 29/70, I85 Bus.
over Rich fork Creek
Federal Aid Project No. BRSTP-29(20)
State Project No. 8.1602101
T.I.P. No. B-4096

INTRODUCTION: Bridge No. 140 is included in the 2002-2008 North Carolina Department of Transportation (NCDOT) Transportation Improvement Program and in the Federal-Aid Bridge Replacement Program. The location is shown in Figure 1. No substantial environmental impacts are anticipated. The project is classified as a Federal "Categorical Exclusion".

I. PURPOSE AND NEED STATEMENT

Bridge Maintenance Unit records indicate the bridge has a sufficiency rating of 45.2 out of a possible 100 for a new structure. The bridge is considered to be structurally deficient. The replacement of this inadequate structure will result in safer traffic operations.

II. EXISTING CONDITIONS

The project is located on southbound US 29/70 and I-85 Bus. over Rich Fork Creek between Lexington and Thomasville in Davidson County (see Figure 1). Development in the area is industrial and residential in nature.

US 29/70 and I-85 Bus. is classified as a rural minor arterial in the Statewide Functional Classification System and it is a Federal-Aid Highway. This route is not a designated bicycle route and there is no indication that an unusual number of bicyclists use this roadway.

In the vicinity of the bridge, US 29/70 and I-85 Bus. has 24-foot (7.3-meter) pavement widths in each direction with 10-foot (3.0-meter) grass shoulders (see Figures 3 and 4). The median width is 24 feet (7.3 meters). The roadway grade is flat in the area of the bridge with a slight rise in grade just west of the bridge. The existing bridge is on a tangent. The roadway is situated approximately 22.0 feet (6.7 meters) above the creek bed.

Bridge No. 140 is a five-span structure that consists of reinforced concrete deck girders with an asphalt wearing surface. The end bents consist of reinforced concrete caps on steel piles. The interior bents consist of reinforced concrete post and web piers on pile footings. The existing bridge (see Figure 3) was constructed in 1946. The overall length of the structure is 213 feet (64.9 meters). The clear roadway width is 30.0 feet (9.1 meters). The bridge is not posted for load limits.

There are no utilities attached to the existing structure. Duke Power has a high-tension line crossing US 29/70 and I-85 Bus. at the south end of the existing bridge. A 4-inch forced sewer line crosses the creek 150 feet west of the bridge. Utility impacts are anticipated to be high.

The current traffic volume of 21,000 vehicles per day (VPD) is expected to increase to 37,500 VPD by the year 2025. The projected volume includes ten- percent truck-tractor semi-trailer (TTST) and six-percent dual-tired vehicles (DT). The posted speed limit is 55 miles (88 kilometers) per hour in the project area.

There were four accidents reported in the vicinity of Bridge No. 140 during a recent three-year period. All four accidents were in the northbound lane and none were related to the bridge.

School bus information was not available for this location. However since an on-site detour is being provided, school bus routing should not be affected.

III. ALTERNATIVES

A. Project Description

The replacement structure will consist of a 230-foot (70.1-meter) long bridge. The bridge will be 36 feet (11.0 meters) in width to provide for two 12-foot (3.6-meter) lanes with an 8-foot (2.4-meter) offset on the outside and a 4-foot (1.2-meter) offset on the inside.

The roadway grade of the new structure will be approximately the same as the existing grade at this location.

The existing roadway will remain a 24-foot (7.2-meter) pavement width to provide two 12-foot (3.6-meter) lanes. An eight-foot (2.4-meter) shoulder with four-foot (1.2 meter) paved and four-foot (1.2 meter) turf will be provided on the outside. A six-foot (1.8 meter) shoulder with two-foot (0.6 meter) paved and four-foot (1.2 meter) turf on the inside. This roadway will be designed as a rural minor arterial.

B. Reasonable and Feasible Alternatives

The two alternatives for replacing Bridge No. 140 that were studied are described below.

Alternative 1 (Recommended) involves replacement of the structure along the existing roadway alignment. A temporary one lane detour structure located northwest of the existing bridge would serve as an on-site detour. Improvements to the approach roadways will be required for a distance of approximately 450 feet (137.2 meters) each end of the structure.

Alternative 2 involves replacement of the structure along the existing roadway alignment. Traffic will be maintained on the northbound bridge in a two-lane two-way configuration, by use of a crossover median detour. The existing northbound structure (No. 138) has a clear roadway width of 30 feet (9.1 meters). This structure would allow for the temporary median barrier and one 12-foot (3.6 meter) travel lane with two one-foot (0.3 meter) shoulders in both directions. Due to this narrow travel way, an off-site wide load detour (US 64, I-85 & NC 109) would be required.

C. Alternatives Eliminated From Further Consideration

A third alternative to use a two-lane on-site detour was eliminated from consideration due to the additional cost and the fact that the traffic did not justify it.

The “do-nothing” alternative will eventually necessitate closure of the bridge. This is not acceptable due to the traffic service provided by US 29/70 & I-85 Bus.

“Rehabilitation” of the old bridge is not practical due to its age, deteriorated condition and design. The deck, superstructure and substructure are all in poor condition.

D. Recommended Alternative and Reasons for Recommendations

Bridge No. 140 will be replaced at the existing location with traffic being maintained by an on-site detour structure as shown by Alternative 1 in Figure 2. The existing northbound structure (No. 138) has a clear roadway width of 30 feet (9.1 meters). Alternative 2 would use this structure to maintain traffic in both directions. This structure would allow for the temporary median barrier and one 12-foot (3.6 meter) travel lane with two one-foot (0.3 meter) shoulders in both directions. Due to this narrow travel way, an off-site wide load detour (US 64, I-85 & NC 109) would be required. This off-site wide load detour would add significantly to the user delays, require 2-3 at grade railroad crossings and possible confusion with local wide load deliveries between the detour points and the actual work zone. Alternative 1 is recommended because it eliminates the tremendous user delays associated with Alternate 2. These user delays are generated when a four lane highway is reduced to a two lane highway with reduced speed limit. Alternate 2 would double the user delays since both directions of US 29 & 70 / I-85 Business would be affected. The NCDOT Division 9 Engineer concurs with the selection of Alternative 1 as the recommended alternative.

IV. ESTIMATED COSTS

The estimated costs for the two alternatives are as follows:

	Alternative 1 Recommended	Alternative 2
Structure	\$ 538,200	\$ 538,200
Roadway Approaches	\$ 221,815	\$ 221,815
Detour Structure and Approaches	\$ 450,000	\$ 350,000
Structure Removal	\$ 51,120	\$ 51,120
Misc. & Mob.	\$ 283,865	\$ 283,865
Eng. & Contingencies	\$ 205,000	\$ 205,000
Total Construction Cost	\$ 1,750,000	\$ 1,650,000
Right-of-way and Utility Costs	\$ 165,875	\$ 152,000
Total Project Cost	\$ 1,915,875	\$ 1,802,000

The estimated cost of the project shown in the 2002-2008 NCDOT Transportation Improvement Program is \$1,100,000, including \$100,000 for right-of-way, and \$1,000,000 for construction.

V. NATURAL RESOURCES

A. Physical Characteristics

Soil and water resources, which occur in the project study area, are discussed below. Soil types and availability of water directly influence composition and distribution of flora and fauna in any biotic community.

Davidson County lies in the Piedmont Physiographic Province. Land in the project study area is characterized as gently to moderately sloping. The project is located northeast of Lexington and southwest of Thomasville. The project study area is located approximately 670 ft (205 m) above mean sea level.

A.1 Soils

The project study area is located within the Poindexter-Enon-Zion soil association. This association is described as gently sloping to steep, well-drained soils with a loamy subsurface and clayey subsoil.

Table 1 describes soil characteristics of the 3 different series that are located in the project area and separates out the 4 different soil map units into the appropriate series. The soil map units are defined following the table.

Table 1. Soil Series and Characteristics of the Project Area

Soil Series	Soil Map Unit in Series ¹	Topographic Location	Drainage	Permeability	Hydric
Chewacla	Ch	flood plains	poor	moderate	hydric inclusions: poorly drained soils
Mecklenburg	MeB	broad ridges and uplands	well	slow	non-hydric
Poindexter	PnE, PuB	upland ridges and side slopes	well	moderate	non-hydric

¹**Ch:** Chewacla clay loam, frequently flooded

MeB: Mecklenburg loam, 2-8% slopes

PnE: Poindexter-Zion sandy loams, 15-25% slopes

PuB: Poindexter-Zion-Urban land complex, 2-15%

A.2 Water Resources

This section contains information concerning those water resources likely to be impacted by the project. Water resource information encompasses the resources' relationship to major water systems, its physical aspects, best usage classification, and water quality of the resources. Probable impacts to these water bodies are also discussed, as are means to minimize impacts.

A.2.1 Characteristics of Water Resources

Water resources located within the project study area lie in the Yadkin-PeeDee River Basin, Division of Water Quality (DWQ) sub-basin 03-07-07, and the United State Department of Interior Hydrologic Unit 03040103. Water resources include Rich Fork Creek.

Rich Fork Creek originates approximately 17.5 mi (28.2 km) northeast of the project study area and flows southwest. Approximately 3.2 mi (5.1 km) southwest of Bridge No. 140, Rich Fork Creek converges with Abbotts Creek. Rich Fork Creek at the project site is approximately 25 ft (7.6 m) wide and is 3 ft (0.9 m) deep in the pools and 1 ft (0.3 m) deep in the riffles. The flow rate was moderate and the clarity was good during the site visit. The substrate is composed primarily of silt with areas having cobble and gravel. A point bar is located north of the bridge, on the eastern bank.

A.2.2 Best Usage Classification

Streams have been assigned a best usage classification by the DWQ. According to the DWQ, the best usage classification of Rich Fork Creek (DWQ Index No. 12-119-7) is C (Date 9/1/74). Class C waters are suitable for aquatic life propagation and survival, fishing, wildlife, secondary recreation, and agriculture. No water resources classified as High Quality Waters (HQW's), Water Supplies (WS-I or WS-II) or Outstanding Resource Waters (ORW's) are located within 1.0 mi (1.6 km) of the project study area.

A.2.3 Water Quality

The DWQ has initiated a basinwide approach to water quality management for the 17 river basins within the state. This was accomplished with the Ambient Monitoring System (AMS) which is a network of stream, lake, and estuarine water quality monitoring stations. The program assesses water quality by collecting physical and chemical water quality data at fixed monitoring sites every five years. This data is used for basinwide assessment and planning. The nearest station is 1.3 mi (2.1 km) northwest of Bridge No. 140 at Lake Thom-A-Lex. This site was last sampled July 1994 and was found to be eutrophic and fully support its designated uses (NCDENR, 1998).

Likewise, the Benthic Macroinvertebrate Ambient Network (BMAN) is managed by the DWQ and is part of an ongoing ambient water quality monitoring program which addresses long term trends in water quality. The program assesses water quality by sampling for selected benthic macroinvertebrate organisms at fixed monitoring sites. Macroinvertebrates are sensitive to very subtle changes in water quality; thus, the species richness and overall biomass of these organisms are reflections of water quality. BMAN sampling station B-20 (Rich Fork Creek, SR 2123, Davidson County) is located 0.97 mi (0.57 km) southwest, downstream from Bridge No. 140. This site was sampled in September 1983 and received a bioclassification of Poor (NCDENR, 1998). BMAN sampling station B-18 (Rich Fork, NC 109, Davidson County) is located 7.4 mi (11.9 km) northeast, upstream of Bridge No. 140. This site was sampled in April 1996 and received a bioclassification of Fair (NCDENR, 1998).

Point source pollution refers to discharges that enter surface water through a pipe, ditch, or other defined points of discharge. Point source dischargers located throughout North Carolina are permitted through the National Pollutant Discharge Elimination System (NPDES) program. Any person discharging pollutants from point source into the waters of the United States is required to obtain a NPDES permit. Lexington Water Treatment Plant (Permit No. NC0028037 Date, 8/18/93) in Davidson County is a permitted point source discharger to Abbotts Creek on US 29/70 & I-85 Business. Abbotts Creek crosses US 29/70-I85 Business 1.4 mi (2.3 km) southwest of Bridge No. 140.

Non-point source pollution refers to runoff that enters surface waters through stormwater flow or a non-defined point of discharge. There are many types of land use activities that can serve as sources of non-point source pollution in the Yadkin-Pee Dee River Basin near the project study area. Agriculture, such as crop production; urban runoff; construction, including roads and land development; and silviculture, including

harvesting, reforestation, and maintenance are the primary sources of non-point source pollution to Rich Fork Creek (NCDENR, 1998).

A.2.4 Summary of Anticipated Impacts to Water Resources

Potential impacts to water resources in the project study area are dependent upon final construction limits. Roadway construction in and adjacent to water resources may result in water quality impacts. Clearing and grubbing activities near the water will result in soil erosion leading to increased sedimentation and turbidity. These effects may extend downstream for considerable distance with decreasing intensity.

Removal of streamside vegetation will have a negative effect on water quality. The vegetation typically shades the water's surface from sunlight, thus moderating water temperature. The removal of streamside canopy during construction will result in more extreme fluctuating water temperatures. During warmer portions of the year, the water temperature will increase, resulting in a decrease in dissolved oxygen because warmer water holds less oxygen. Streambank vegetation is also important because it stabilizes streambanks and reduces sedimentation by trapping soil particles.

Construction activities adjacent to water resources increase the potential for toxic compounds (gas, oil, and highway spills) to be carried into nearby water resources via precipitation, sheet flow, and subsurface drainage. Increased amounts of toxic materials can adversely alter the water quality of any water resource, thus impacting its biological and chemical functions. Indirect impacts to surface waters may extend both upstream and downstream of the project study area. Indirect impacts may include changes in flooding regime, discharge, erosion, and sedimentation patterns.

Removal of a bridge can cause impacts to water resources. Bridge No. 140 is entirely composed of reinforced concrete. There is a potential for components of the bridge to be dropped into waters of the United States during construction. Conditions in the stream **will** raise sediment concerns and therefore a turbidity curtain **is** recommended as a preventative measure.

In order to minimize impacts to water resources in the entire impact area, NCDOT's Best Management Practices (BMPs) for the Protection of Surface Waters should be strictly enforced during the entire life of the project. The NCDOT, in cooperation with the DWQ, has developed a sedimentation control program for highway projects which adopts formal BMPs for the protection of surface waters. Because Bridge No. 140 is being removed, NCDOT's BMP for Bridge Demolition and Removal shall be used as well. These practices were developed in coordination with the United States Army Corps of Engineers (COE), the North Carolina Wildlife Resource Commission (WRC), and the National Marine Fisheries Service in order to establish a consistent, environmentally

sound approach to the demolition and removal of bridges on North Carolina's public road system.

Erosion and sedimentation will be most pronounced as a result of disturbance of the stream banks and substrate. Sedimentation from these activities may be high during construction, but should diminish rapidly following project completion if exposed soils are revegetated and streambanks stabilized.

Although temporary impacts to the stream cannot be avoided altogether, impacts could be minimized if Alternate 2 was chosen rather than Alternate 1. Less streamside vegetation would be removed and there would be decreased construction activity adjacent to water resources with Alternate 2. Therefore, from a water resources perspective, Alternate 2 is preferred.

B. Biotic Resources

Biotic resources include aquatic and terrestrial ecosystems. This system describes those ecosystems encountered in the study area as well as the relationships between flora and fauna within these ecosystems. Composition and distribution of biotic communities throughout the project area are reflective of topography, hydrologic influences, and past and present land uses. Descriptions of the terrestrial systems are presented in the context of plant community classifications.

Dominant flora and fauna likely to occur in each community are described and discussed. Fauna observed during field investigations are denoted with an asterisk (*). Scientific nomenclature and common names (when applicable) are provided for each animal and plant species described. Subsequent references to the same organism will include the common name only.

Plant community descriptions are based on a classification system utilized by the North Carolina Natural Heritage Program (NHP) (Schafale and Weakley 1990). When appropriate, community classifications were modified to better reflect field observations. Vascular plant names follow nomenclature found in Radford et al. (1968). Habitats used by terrestrial wildlife and aquatic organisms, as well as expected population distributions, were determined through field observations, evaluation of available habitat, and supportive documentation (Martof et al. 1980; Webster et al. 1985; Rohde et al. 1994; Potter et al. 1980).

B.1 Terrestrial Communities

There are two terrestrial communities that are identifiable in the project study area: disturbed community, and hardwood forest.

B.1.1 Disturbed Community

This community includes two types of habitat that have recently been or are currently impacted by human disturbance including regularly maintained roadside shoulder and irregularly maintained roadside shoulder. These habitats are kept in a low-growing, early successional state. The regularly maintained roadside shoulder is mowed frequently and is dominated by herbaceous vegetation. Dominant species include fescue (*Festuca* sp.), foxtail grass (*Setaria* sp.), poison ivy (*Toxicodendron radicans*), common plantain (*Plantago major*), wood sorrel (*Oxalis* sp.), dandelion (*Taraxacum officinale*), and violets (*Viola* sp.). The irregularly maintained disturbed community has higher growing herbaceous vegetation with scattered tree saplings. Dominant vegetation includes similar species as the regularly maintained areas as well as broomsedge (*Andropogon* sp.), red cedar (*Juniperus virginiana*), and sweetgum (*Liquidambar styraciflua*) saplings.

B.1.2 Hardwood Forest

This hardwood forest community is composed of uneven aged trees and low-growing herbaceous vegetation, with the exception of giant cane (*Arundinaria gigantea*). The vegetation is similar throughout; however, the frequency of riparian vegetation increases as the project study area approaches the creek. Hydrophytic vegetation also increases in the defined wetland communities located within the hardwood forest community. Species not predominate throughout this community but that were dominant in the defined wetland area, are listed in the wetland description (See Section C.1.1.2). The hardwood forest is located in a depression compared to the surrounding disturbed community with the elevation steadily increasing as it gets further away from the stream. Some of the wetland areas located in this community may have resulted from stormwater running off the steep fill slopes of the road and settling in the depression.

Dominant species located in the canopy and subcanopy include sycamore (*Platanus occidentalis*), ironwood (*Carpinus caroliniana*), tulip poplar (*Liriodendron tulipifera*), red maple (*Acer rubrum*), sweetgum, riverbirch (*Betula nigra*), box elder (*Acer negundo*), green ash (*Fraxinus pennsylvanica*), elderberry (*Sambucus canadensis*), and winged elm (*Ulmus alata*). The herbaceous and shrubby vegetation includes giant cane, fescue, oatgrass (*Danthonia* sp.), common plantain, ragweed (*Ambrosia* sp.), violets, poison ivy (*Toxicodendron radicans*), trumpet creeper (*Campsis radicans*) Virginia creeper (*Parthenocissus quinquefolia*), Japanese honeysuckle (*Lonicera japonica*), common greenbrier (*Smilax rotundifolia*), jewelweed (*Impatiens* sp.), muscadine grape (*Vitis rotundifolia*), multiflora rose (*Rosa multiflora*), Chinese privet (*Ligustrum sinense*), and blackberry (*Rubus argutus*).

B.2 Faunal Component

Many species prefer open, disturbed habitat to feed and nest in. The least shrew (*Cryptotis parva*) inhabits relatively open areas dominated by herbaceous vegetation. Birds such as mourning doves (*Zenaidura macroura*) and American crows (*Corvus ossifragus*) forage for seeds and insects in open, disturbed areas. Soaring over open areas searching for carrion, turkey vultures (*Cathartes aura*) may be observed.

Many species are highly adaptive and may utilize the edges of forests and clearings or prefer a mixture of habitat types. The Eastern cottontail (*Sylvilagus floridanus*) prefers a mix of herbaceous and woody vegetation and may be found in the dense shrub vegetation or out in the pasture. White-tailed deer (*Odocoileus virginianus*)* will utilize the forested areas as well as the adjacent open areas. The black rat snake (*Elaphe obsoleta*) will come out of forested habitat to forage in open areas. Northern mockingbirds (*Mimus polyglottos*) may be observed perched singing in edge habitat in urban areas. Blue jays (*Cyanocitta cristata*), chipping sparrows (*Spizella passerina*)*, and bluebirds (*Sialia sialis*) also utilize edge habitat.

Many species prefer to forage and nest primarily in forested communities. The opossum (*Didelphis virginiana*) and the raccoon (*Procyon lotor*)* prefer woodlands but can be observed as roadkill in open areas as well. In the leaf litter of the forested habitats, the golden mouse (*Ochrotomys nuttalli*) and the white-footed mouse (*Peromyscus leucopus*) may be found. Gray squirrels (*Sciurus carolinensis*)* are often observed in wooded areas. The spring peeper (*Hyla crucifer*) can be found under forest litter and in brushy undergrowth. The Eastern box turtle (*Terrapene carolina*) is a terrestrial turtle but will be found near streams in hot, dry weather. The five-lined skink (*Eumeces fasciatus*) may also be found in forested communities. Birds such as the Northern cardinal (*Thryothorus ludovicianus*)*, tufted titmouse (*Parus bicolor*)*, red eyed vireo (*Vireo olivaceus*)*, and carolina wren (*Thryothorus ludovicianus*)* will forage and nest within the hardwood forest community. The Southeastern shrew (*Sorex longirostris*) may be found in the more densely vegetated areas of the hardwood forest.

B.3 Aquatic Community

There is a perennial stream located in the project study area. Physical processes such as flow variability, channel structure, and substrate have a tremendous influence on the ecology of streams. Physical processes in addition to the chemistry and temperature of the stream water have a profound influence on the aquatic biota that the stream is capable of supporting.

Perennial streams sustain flow throughout the year. Perennial streams support an assemblage of fauna that require constant source of flowing water, as compared to intermittent or standing water. Mammals such as white-tailed deer and raccoons will utilize streams from the banks. The northern dusky salamander (*Desmognathus fuscus*) and the three-lined salamander (*Eurycea guttolineata*) both are found in wooded areas of piedmont streams and creeks. Green frogs (*Rana clamitans*), Fowler's toads (*Bufo woodhousei*), Eastern box turtles, and painted turtles (*Chrysemys picta*) frequent forested streams. Fish species that may be located here include the rosyside dace (*Clinostomus funduloides*), bluehead chub (*Nocomis leptcephalus*), golden shiner (*Notemigonus crysolencas*), redlip shiner (*Notropis chiliticus*), creek chub (*Semotilus atromaculatus*), redbreast sunfish (*Lepomis auritus*), and bluegill (*Lepomis macrochirus*).

B.4 Summary of Anticipated Impacts

Construction of the subject project will have various impacts on the biotic resources described. Any construction related activities in or near these resources have the potential to impact biological functions. This section quantifies and qualifies impacts to the natural resources in terms of the ecosystems affected. Usually, project construction does not require the entire ROW width; therefore, actual impacts may be considerably less. All measurements are approximate.

B.4.1 Terrestrial Impacts

Calculated impacts to terrestrial communities reflect the relative abundance of each community (Table 2). Project construction will result in the clearing and degradation of portions of these communities. Estimated impacts are derived using the ROW limits within the project study area. Because the ROW limits are designated as the same area for both alternates, the calculated impacts will be the same. However, it is anticipated that the impacts for Alternate 2 will be less than the calculated impacts since it will not require the construction of a temporary on-site detour.

Table 2. Anticipated Impacts to Terrestrial Communities

Community	Area of Impact *
Disturbed Community	0.40 ha / 0.98 ac
Hardwood Forest	0.48 ha / 1.18 ac
TOTAL	0.88 ha / 2.16 ac

*Because the ROW limits for both alternates are the same, the impacts depicted for each will be the same.

The biotic communities found within the project area will be altered as a result of project construction. Terrestrial communities serve as nesting, foraging, and sheltering habitat for fauna. During construction, species that utilize open disturbed habitat will temporarily be displaced. Eventually, altered areas will revegetate and a disturbed community will be re-established. Because the species that inhabit disturbed communities are adapted to living in highly altered habitats, the area should be repopulated by species for which suitable habitat is provided following project completion.

Some of the forested habitats located in the project study area are already relatively fragmented by disturbed, open areas. Following construction completion and revegetation, edge species will still have adequate habitat and the impacts from the loss of habitat should be minimal. The forested habitat loss will potentially impact fauna not located in the project study area as well. Interior species may be impacted from the reduced forested habitat available. If forested tracts become too small in area, interior species will not repopulate. However, because the impact will be along the already

disturbed edge habitat, and due to the fragmented nature of the area, impacts to fauna in the forest communities should be minimal.

B.4.2 Aquatic and Wetland Impacts

Construction activities will impact the water resources located in the project area as well as those downstream. Impacts are likely to result from the physical disturbance of aquatic habitats (i.e. substrate and water quality). Disturbance of aquatic habitats has a detrimental effect on aquatic community composition by reducing species diversity and the overall quality of aquatic habitats. Physical alterations to aquatic habitats can result in the following impacts to aquatic communities:

- Inhibition of plant growth
- Algae blooms resulting from increased nutrient concentrations
- Loss of benthic macroinvertebrates through scouring resulting from an increased sediment load.

Road construction impacts can effect the functions that wetlands perform in ecosystem as well. Wetlands influence regional water flow regimes by intercepting and storing storm runoff which ultimately reduces the dangers of flooding in surrounding and downstream areas. Loss of wetland communities will result in loss of water storage area. Wetlands have been documented to remove organic and inorganic nutrients and toxic materials from water that flows across them as well as decrease the sediment load. In this respect, impacting wetlands can directly affect the water quality, and therefore the aquatic organisms, of the streams in the project study area.

Impacts to aquatic communities can be minimized by strict adherence to BMPs for Protection of Surface Waters and BMPs for Bridge Demolition and Removal. Strict erosion and sedimentation controls will be maintained during the entire life of the project.

B.4.3 Environmentally Preferred Alternate

Because the ROW limits are the same for both Alternate 1 and Alternate 2, impacts are depicted the same for both alternates in Section B.4.1 and B.4.2. However it is anticipated that project construction for Alternate 2 will require less area of the ROW than Alternate 1 because it will not require an on-site detour to be constructed. It is anticipated that impacts to both aquatic and terrestrial communities will be greater for Alternate 1. Therefore, from a natural resources perspective, Alternate 2 is preferred.

C. Jurisdictional Issues

This section provides descriptions, inventories, and impact analysis pertinent to two important issues: Waters of the United States and Protected and Rare Species.

C.1 Waters of the United States

Surface waters and jurisdictional wetlands fall under the broad category of “waters of the United States,” as defined under Title 33 of the Code of Federal Regulations (CFR) §328.3 (a). Wetlands, defined in 33 CFR §328.3 (b), are those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated conditions. Surface waters are waters used in interstate or foreign commerce, waters subject to ebb and flow of tides, all interstate waters including interstate wetlands, and all other waters such as intrastate lakes, rivers, and streams. Any action that proposes to place fill material into these areas falls under the jurisdiction of the COE under Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344).

C.1.1 Characteristics of Wetlands and Surface Waters

C.1.1.1 Jurisdictional Streams

Rich Fork Creek is the only jurisdictional stream located in the project study area and is fully discussed in Section A.2.1.

C.1.1.2 Jurisdictional Wetlands

Potential wetland communities were evaluated using criteria specified in the 1987 "Corps of Engineers Wetland Delineation Manual". For an area to be considered a "wetland", the following specifications must be met; 1) presence of hydric soils (low soil chroma values), 2) presence of hydrophytic vegetation, and 3) evidence of hydrology, including; saturated soils, stained leaf litter, oxidized rhizospheres, matted vegetation, high water marks on trees, buttressed tree bases, and surface roots.

There are 5 wetland areas identified within the project study area. The approximate impact area for each is noted in Table 3.

Wetland A

Wetland A is located directly under the bridge bents west of Rich Fork Creek near the banks in a very disturbed location. It is approximately 0.06 ac (0.024 ha) in area. This wetland is an open area that is driven on to cross under the bridge, with compacted clay soils and is considered marginal. It is unlikely that the hydrology is coming from overbank flooding of Rich Fork Creek. Low chroma soil colors were observed.

Dominant vegetation includes poison ivy, rush (*Juncus* sp.), red maple, grape, and American elm (*Ulmus americana*).

Wetland B

Wetland B is located under the bridge bents east of Rich Fork Creek near the banks in a very disturbed location. It is approximately 0.064 ac (0.026 ha) in area. It is in an open area with compacted clay soils and is considered marginal. It is unlikely that the hydrology is coming from overbank flooding of Rich Fork Creek. Low chroma soil colors and water stained leaves were observed. Dominant vegetation includes poison ivy, grape, box elder, goldenrod, and bedstraw (*Galium aparine*).

Wetland C

Wetland C is located west of Rich Fork Creek in a depression that is parallel to US 29/70 & I-85 Business. This wetland is located within a hardwood forest community in an area where the abundance of hydrophytic vegetation is increased. It is approximately 0.071 ac (0.029 ha) in area. Low chroma soil colors (5Y4/1), water stained leaves, water in the pit, and saturated soils were observed. Dominant vegetation includes Japanese honeysuckle, netted chain fern (*Woodwardia areolata*), sweetgum, elderberry, ironwood, green ash, and tag alder (*Alnus serrulata*).

Wetland D

Wetland D is located east of Rich Fork Creek parallel to US 29/70 & I-85 Business in the hardwood forest community. It is approximately 0.012 ac (0.005 ha) in area. Low chroma soil colors (10YR5/1), drainage patterns were observed however the soils were marginal in areas. Dominant vegetation includes poison ivy, box elder, sweetgum, red maple, violet, and a sedge (*Carex* sp.)

Wetland E

Wetland E is located east of Rich Fork Creek, northeast of wetland D, and is associated with a ponded area outside of the ROW limits. This wetland is located in a hardwood forest community. It is approximately 0.022 ac (0.009 ha) in area. Low chroma soil colors (10YR5/1), drainage patterns were observed however the soils were marginal in areas. Dominant vegetation includes poison ivy, box elder, sweetgum, red maple, violet, and a sedge.

C.1.2 Summary of Anticipated Impacts to Water Resources

Approximately 90 feet (24.4 meters) of Rich Fork Creek is located within the project study area. Actual impacts to the surface water community may be less than reported because the entire ROW width and easements are often not impacted by construction projects. The amount of surface water impacts may be modified by any changes in roadway design. Temporary causeways associated with the on-site detour and/or bridge construction and demolition may be required.

Bridge No. 140 is composed entirely of reinforced concrete. There is a potential for components of the bridge to be dropped into waters of the United States during construction. The resulting temporary fill associated with the concrete bridge is approximately 150 cubic yards (115 cubic meters). Conditions in the stream **will** raise sediment concerns and therefore a turbidity curtain **is** recommended as a preventative measure. Bridge demolition is classified as a **Case 3**, for which there are no special restrictions beyond those outlined in BMPs for the Protection of Surface Waters and BMPs for Bridge Demolition and Removal.

There are 5 wetland systems located within the ROW limits of the project. The total estimated impact to these areas by the project is 0.229 ac (0.093 ha).

Table 3. Estimated Area of Wetland Impacts

Wetland Name	Impact Area (acres)	(hectares)
Wetland A	0.060	0.024
Wetland B	0.064	0.026
Wetland C	0.071	0.029
Wetland D	0.012	0.005
Wetland E	0.022	0.009
Total	0.229 ac	0.093 ha

Because the ROW limits are the same for both Alternate 1 and Alternate 2, impacts are depicted the same for both alternates in Section B.4.1 and B.4.2. However it is anticipated that project construction for Alternate 2 will require less area of the ROW than Alternate 1 because it will not require an on-site detour to be constructed. It is anticipated that impacts to both wetland and streams will be greater for Alternate 1. Therefore, from a waters of the United States perspective, Alternate 2 is preferred.

C.1.3 Permits

Impacts to surface waters are anticipated from project construction. In accordance with provisions of Section 404 of the CWA, a permit will be required from the COE for discharge of dredge or fill material into “waters of the United States.” Due to surface water impacts, a Section 404 Nationwide (NWP) 23 Permit will be necessary for this project. The COE reserves the discretionary authority to process the permit application as an individual permit.

A NWP 23 authorizes activities undertaken, assisted, authorized, regulated, funded or financed in whole, or part, by another Federal agency or department where: that agency or department has determined that pursuant to the council on environmental quality regulation for implementing the procedural provisions of the National Environmental Policy Act; that the activity, work, or discharge is categorically excluded from environmental documentation because it is included within a category of actions which neither individually nor cumulatively have a significant effect on the human environment, and; that the office of the Chief of Engineers has been furnished notice of the agency' or department's application for the categorical exclusion and concurs with that determination.

This project will require a CWA Section 401 Water Quality Certification from the DWQ prior to the issuance of the Nationwide Permit. Section 401 of the CWA requires that the state issue or deny water certification for any federally permitted or licensed activity that may result in a discharge to waters of the United States. The issuance of a 401 permit from the DWQ is a prerequisite to issuance of a Section 404 permit.

C.1.4 Avoidance, Minimization, Mitigation

The function of avoidance, minimization, and mitigation is to restore and maintain the chemical, biological, and physical integrity of waters of the United States by avoiding impacts, minimizing impacts, and rectifying impacts. Each of these three aspects (avoidance, minimization, and compensatory mitigation) must be considered sequentially.

Avoidance mitigation examines all appropriate and practical possibilities of averting impacts to waters of the United States. According to a 1990 Memorandum of Agreement (MOA) between the Environmental Protection Agency (EPA) and COE, in determining "appropriate and practical" measures to offset unavoidable impacts, such measures should be appropriate to the scope and degree of those impacts and practical in terms of costs, existing technology and logistics in light of overall project purposes.

Minimization includes the examination of appropriate and practical steps to reduce the adverse impacts to waters of the United States. Implementation of these steps will be required through project modifications and permit conditions. Practical means to minimize impacts to surface waters and wetlands impacted by the proposed project include:

- Decreasing the footprint of the proposed project through the reduction of median width, ROW widths, fill slopes and/or road shoulder widths.
- Installation of temporary silt fences, earth berms, and temporary ground cover during construction.
- Strict enforcement of sedimentation and erosion control BMPs for the protection of surface waters and wetlands.
- Reduction of clearing and grubbing activity in and adjacent to water bodies.

Compensatory mitigation is not normally considered until anticipated impacts to waters of the United States have been avoided and minimized to the maximum extent possible. Appropriate and practicable compensatory mitigation is required for unavoidable adverse impacts which remain after all appropriate and practicable minimization has been required. Compensatory actions often include restoration, creation, and enhancement of waters of the United States. Such actions should be undertaken in areas adjacent to or contiguous to the discharge site.

C.2 Protected and Rare Species

Some populations of fauna and flora have been in, or are in, the process of decline either due to natural forces or their inability to coexist with human activities. Federal law (under the provisions of the Endangered Species Act [ESA] of 1973, as amended) requires that any action, likely to adversely affect a species classified as federally-protected, be subject to review by the USFWS. Other species may receive additional protection under separate state laws.

C.2.1 Federally-protected Species

Plants and animals with federal classifications of Endangered, Threatened, Proposed Endangered, and Proposed Threatened are protected under provisions of Section 7 and Section 9 of the ESA. As of 22 March 2001, there are three federally-protected species listed for Davidson County (Table 4). A brief description of each species' characteristics and habitat follows.

Table 4. Federally Protected Species in Davidson County.

Common Name	Scientific Name	Status ¹
Bog Turtle	<i>Clemmys muhlenbergii</i>	T(S/A)
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Threatened
Schweinitz's sunflower	<i>Helianthus schweinizii</i>	Endangered

¹ **Endangered** species are a taxon which is in danger of extinction throughout all or a significant portion of its range.

Threatened species are a taxon likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

T(S/A):Threatened due to Similarity of Appearance listed species are a species that is threatened due to similarity of appearance with other rare species and is listed for its protection. These species are not biologically endangered or threatened and are not subject to Section 7 consultation.

***Clemmys muhlenbergii* (Bog turtle)** Threatened Due to Similarity of Appearance
(southern population)

Family: Emydidae

Date Listed: 4 June 1987

The bog turtle is found in the eastern United States, in two distinct regions. The northern population, in Massachusetts, Connecticut, southern New York, New Jersey, Pennsylvania, Maryland, and Delaware is listed as Threatened and protected by the Endangered Species Act. The southern population, occurring in Virginia, North Carolina, South Carolina, Tennessee, and Georgia is listed as Threatened Due to Similarity of Appearance.

This species is listed as Threatened Due to Similarity of Appearance, and is therefore not protected under Section 7 of the Endangered Species Act. However, in order to control the illegal trade of individuals from the protected northern population, federal regulations are maintained on the commercial trade of all bog turtles. No survey is required for this species.

***Haliaeetus leucocephalus* (Bald Eagle) Threatened**

Family: Accipitridae

Date Listed: 11 March 1967

The bald eagle is a large raptor. The characteristic adult plumage consists of a white head and tail with a dark brown body. Juvenile eagles are completely dark brown and do not fully develop the majestic white head and tail until the fifth or sixth year. Fish are the primary food source but bald eagles will also take a variety of birds, mammals, and turtles (both live and as carrion) when fish are not readily available. Adults average about three feet from head to tail, weigh approximately 10 to 12 pounds and have a wingspread that can reach seven feet. Generally, female bald eagles are somewhat larger than the males.

Breeding pairs of bald eagles unite for life or until the death of their mate. The typical nest is constructed of large sticks and lined with soft materials such as pine needles and grasses. Many nests are believed to be used by the same pair of eagles year after year. Eagle nests are found in close proximity to water (within a half mile) with a clear flight path to the water, in the largest living tree in an area, and having an open view of the surrounding land. Human disturbance can cause an eagle to abandon otherwise suitable habitat.

BIOLOGICAL CONCLUSION:

NO EFFECT

No water bodies large enough to support this species occur within a half -mile of the project study area. The edge of Lake Thom-A-Lex is located within 1 mi (1.6 km) of the project area, however, a review of the NHP database of Rare Species and Unique Habitats on 27 February 2001 revealed no records of this species within 1 mi (1.6 km) of the project study area. Project construction will not have an impact on foraging or nesting opportunities for the bald eagle.

***Helianthus schweinitzii* (Schweinitz's Sunflower) Endangered**

Family: Asteraceae

Date Listed: 6 June 1991

This rhizomatous perennial herb grows from 3 to 6 feet (1 to 2 meters) tall from a cluster of carrot-like tuberous roots. Stems are usually solitary, branching only at or above mid-stem. The stem is usually pubescent but can be nearly glabrous; it is often purple. The leaves are opposite on the lower stem, changing to alternate above. In shape, they are lanceolate, wider near their bases, but variable in size, being generally larger on the lower stem, and gradually reduced upwards. Texture of the leaves is rather thick and stiff. The pubescence of the leaves is distinctive and is one of the best characters to distinguish Schweinitz's sunflower from its relatives. The upper surface of the leaves is rough, with the broad-based spinose hairs directed toward the tip of the leaf. The lower surface is more or less densely pubescent, with soft white hairs obscuring the leaf surface. From September to frost, Schweinitz's sunflower blooms with comparatively small heads of yellow flowers.

The species occurs in clearings and edges of upland woods on moist to dryish clays, clay-loams, or sandy clay-loams that often have a high gravel content and are moderately podzolized. The underlying rock types are highly weatherable, generally contain low amounts of resistant minerals such as quartz, and generally weather to fine-textured soils. Schweinitz's sunflower usually grows in open habitats not typical of the current general landscape in the piedmont of the Carolinas.

BIOLOGICAL CONCLUSION:

NO EFFECT

Potential habitat for Schweinitz's sunflower is present within the project study area. A known specimen was observed prior to the site visit. A plant by plant survey for Schweinitz's sunflower along the project corridor was conducted on 24 September 2001 by NCDOT biologist. No individual plants or populations of Schweinitz's sunflower were observed. A review of the North Carolina Natural Heritage Program database of Rare Species and Unique Habitats revealed no known occurrences of this species within 1 mile (1.6 km) of the project study area. Therefore it can be concluded that construction of this project will not impact this species.

C.2.2 Federal Species of Concern

Federal Species of Concern (FSC) are those plant and animal species which may or may not be listed in the future. As of 26 February 2001, there are two FSC listed for Davidson County. FSC are not afforded federal protection under the ESA and are not subject to any of its provisions, including Section 7, until they are formally proposed or listed as Threatened or Endangered. Organisms which are listed as Endangered, Threatened, or Special Concern by the NHP list of Rare Plants and Animal Species 1993 are afforded state protection or are monitored under the State Endangered Species Act and the NC Plant Protection and Conservation Act of 1979. However, the level of protection given to the state listed species does not apply to NCDOT activities. As of 26 February 2001,

there is also one C1 species listed for Davidson County. C1 species are a taxon under consideration for official listing for which there is sufficient information to support listing. Table 5 provides the FSC and C1 species listed for Davidson County and indicates the species state status, and whether or not there is adequate habitat for each species in the project area.

Table 5. Federal Species of Concern and C1 Species Listed for Davidson County

Common Name	Scientific Name	State Status ¹	Habitat
Carolina darter	<i>Etheostoma collis lepidinion</i>	SC	Yes
Heller's trefoil	<i>Lotus helleri</i>	C	Yes
Georgia aster	<i>Aster georgianus</i>	C1*	Yes

Special Concern (SC) species are a taxon in North Carolina which requires monitoring

Candidate (C) species are a taxon that is very rare in North Carolina, generally with 1-20 populations in the state.

C1 species are a taxon under consideration for official listing for which there is sufficient information to support listing.

*C1 is a federal listing classification. Georgia aster is not a FSC.

A review of the NHP database of Rare Species and Unique Habitats on 27 February 2001 revealed no record of any FSC or any other rare and/or protected species within 1 mi (1.6 km) of the project study area. Surveys for the listed FSC were not conducted during the site visit, nor were any observed.

VI. CULTURAL RESOURCES

A. Compliance Guidelines

This project is subject to compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, implemented by the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106, codified at Title 36 CFR Part 800. Section 106 requires Federal agencies to take into account the effect of their undertakings (federally funded, licensed, or permitted) on properties included in or eligible for inclusion in the National Register of Historic Places and afford the Advisory Council a reasonable opportunity to comment on such undertakings.

B. Historic Architecture

A meeting was held with The State Historic Preservation Office (SHPO) to evaluate potential effects of the project. Bridge No. 140 was built in 1946 and is the only historic architectural structure located within the area of potential effect. Therefore, SHPO recommended that the bridge be surveyed for eligibility for the National Register, and recommended that no additional historic architectural surveys be conducted.

The area of potential effect (APE) was reviewed by an NCDOT staff architectural historian, representatives of the Federal Highway Administration, and the SHPO. Bridge No. 140 was determined to be not eligible for the National Register. The Concurrence Form for Properties Not Eligible for the National Register of Historic Places is included in the appendix.

C. Archaeology

The SHPO indicated that there were no known recorded archaeological sites within the area of potential effect. However, since an on-site detour is proposed, the SHPO recommended that an archaeological investigation be conducted in connection with this project.

The area of potential effect was surveyed by NCDOT archaeologist and a report was submitted to the SHPO. There were no archaeological sites discovered. The SHPO concurred with this finding in their letter dated October 25, 2001 (see appendix).

VII. GENERAL ENVIRONMENTAL EFFECTS

The project is expected to have an overall positive impact. Replacement of an inadequate bridge will result in safer traffic operations.

The project is considered to be a Federal "Categorical Exclusion" due to its limited scope and lack of substantial environmental consequences.

The bridge replacement will not have an adverse effect on the quality of the human or natural environment with the use of the current North Carolina Department of Transportation standards and specifications.

The project is not in conflict with any plan, existing land use, or zoning regulation. No change in land use is expected to result from the construction of the project.

No adverse impact on families or communities is anticipated. Right-of-Way acquisition will be limited. No relocatees are expected with implementation of the proposed alternative.

No adverse effect on public facilities or services is expected. The project is not expected to adversely affect social, economic, or religious opportunities in the area.

The proposed project will not require right-of-way acquisition or easement from any land protected under Section 4(f) of the Department of Transportation Act of 1966.

This project has been coordinated with the United States Natural Resources Conservation Service. The Farmland Protection Policy Act requires all federal agencies or their representatives to consider the potential impact to prime farmland of all land acquisition

and construction projects. All work will be done within the existing right-of-way. There are no soils classified as prime, unique, or having state or local importance in the vicinity of the project. Therefore, the project will not involve the direct conversion of farmland acreage within these classifications.

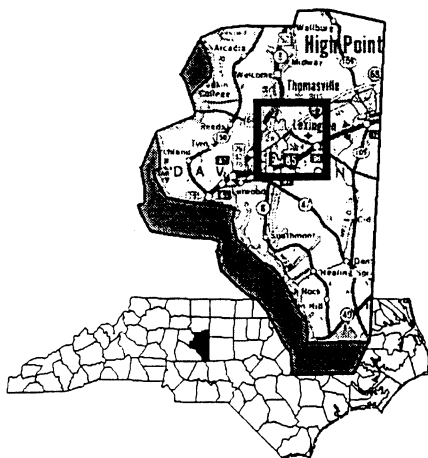
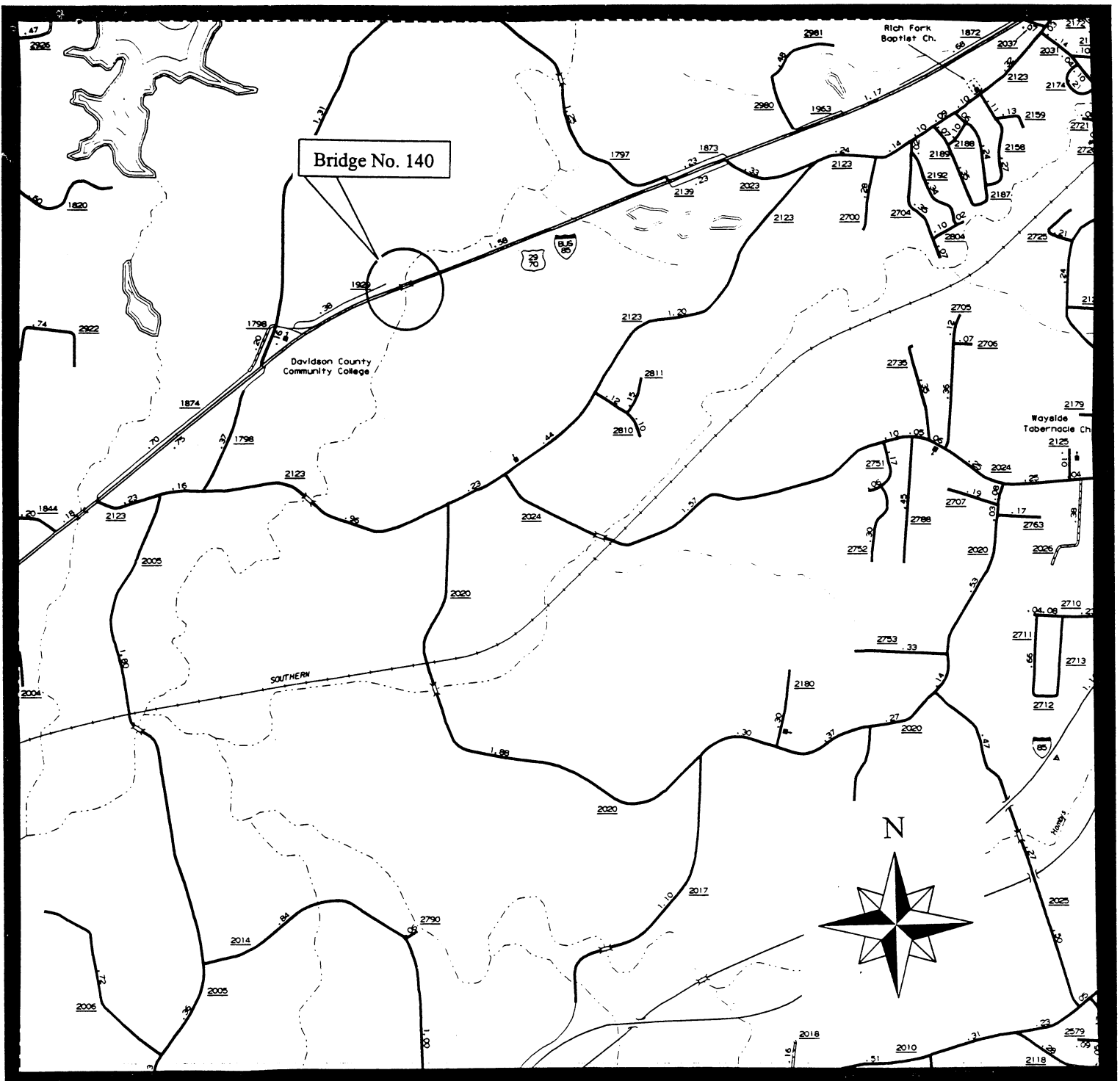
This project is an air quality “neutral” project, so it is not required to be included in the regional emissions analysis and a project level CO analysis is not required. If vegetation is disposed of by burning, all burning shall be done in accordance with applicable local laws and regulations of the North Carolina State Implementation Plan (SIP) for air quality in compliance with 15 NCAC 2D.0520. This evaluation completes the assessment requirements for air quality (1990 Clean Air Act Amendments and the National Environmental Policy Act) and no additional reports are required.


The project will not substantially increase traffic volumes. Therefore, it will not have substantial impact on noise levels. Temporary noise increases may occur during construction. This evaluation completes the assessment requirements for highway traffic noise of Title 23, Code of Federal Regulation (CFR), Part 772 and no additional reports are required.

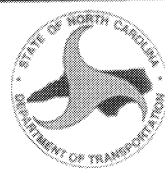
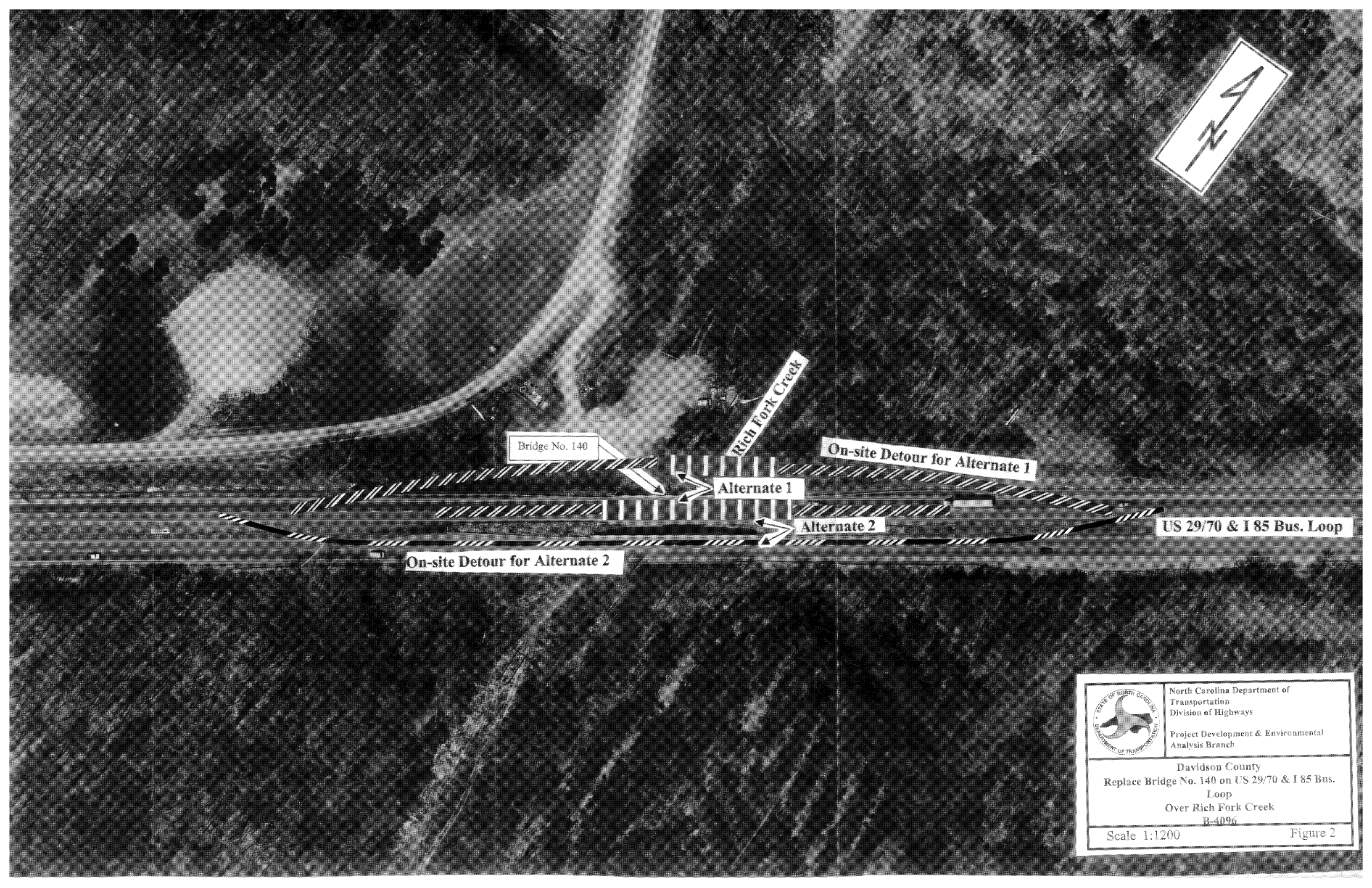
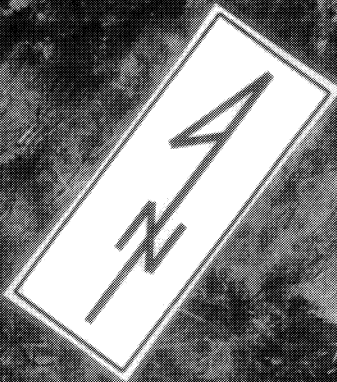
An examination of records at the North Carolina Department of Environment and Natural Resources, Division of Environmental Management, Groundwater Section and the North Carolina Department of Human Resources, Solid Waste Management Section revealed no underground storage tanks or hazardous waste sites in the project area.

Davidson County is a participant in the National Flood Insurance Program. There are no practical alternatives to crossing the floodplain area. Any shift in alignment will result in an impact area of about the same magnitude. The proposed project is not anticipated to increase the level or extent of upstream flood potential.

On the basis of the above discussion, it is concluded that no substantial adverse environmental impacts will result from implementation of the project.



	<p>NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PROJECT DEVELOPMENT & ENVIRONMENTAL ANALYSIS BRANCH</p>
<p>DAVIDSON COUNTY REPLACE BRIDGE 140 ON US 29/70 -I 85 BUS OVER RICH FORK CREEK B-4096</p>	
<p>Figure One</p>	



North Carolina Department of
Transportation
Division of Highways

Project Development & Environmental
Analysis Branch

Davidson County
Replace Bridge No. 140 on US 29/70 & I 85 Bus.
Loop
Over Rich Fork Creek
B-4096

Scale 1:1200

Figure 2



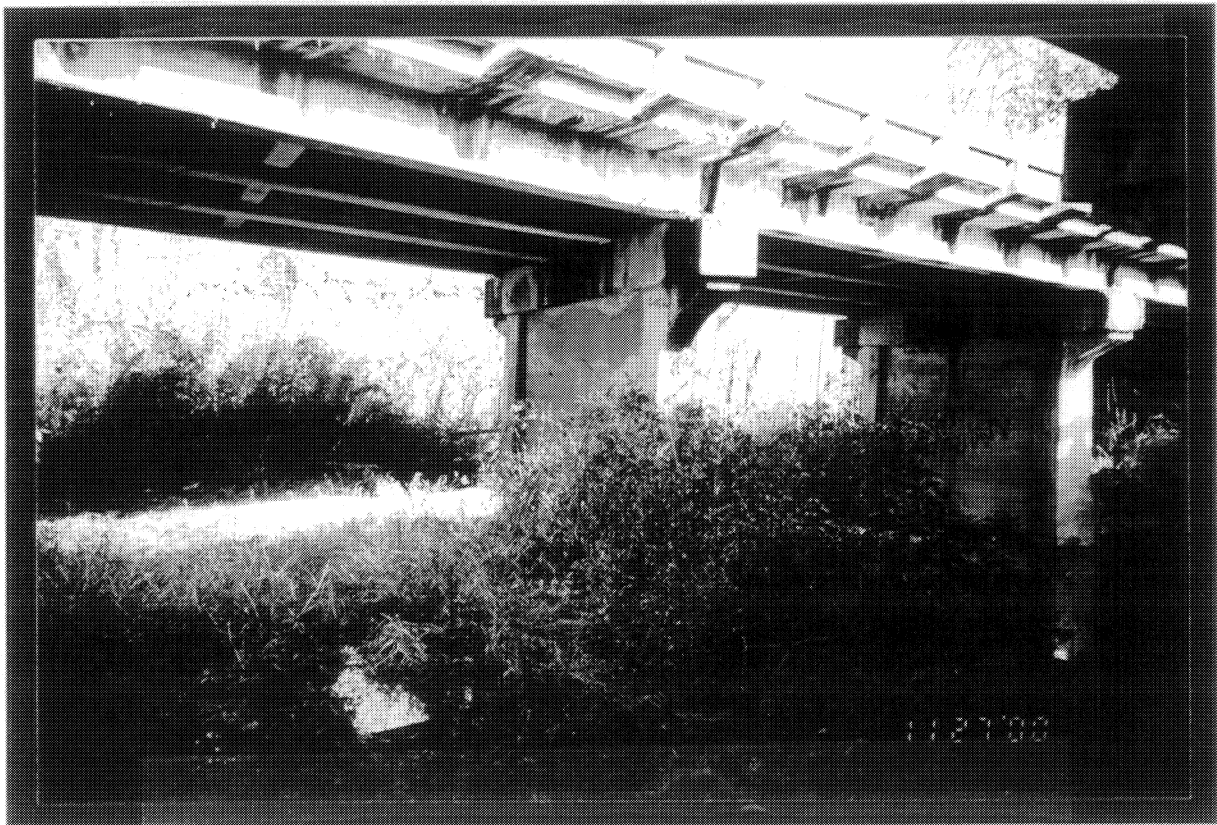
Looking South from the Bridge



Looking North from the Bridge



West Face of Bridge



East Face of Bridge

B-4096

FIGURE 4



Johnson

**North Carolina Department of Cultural Resources
State Historic Preservation Office**

David L. S. Brook, Administrator

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary

Division of Archives and History
Jeffrey J. Crow, Director

October 25, 2001

MEMORANDUM

TO: William D. Gilmore, Manager
Project Development and Environmental Analysis Branch
Division of Highways
Department of Transportation

FROM: David Brook *David Brook*

SUBJECT: Bridge No. 140 on US 29/70/I-85, Davidson County, B-4096, ER 01-7912, ER 02-7602

Thank you for your letter of September 5, 2001, transmitting the archaeological survey report by Brian Overton and Paul Mohler for the above project. No archaeological sites were discovered. We recommend that no archaeological work be conducted for this project as proposed.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763. In all future communication concerning this project, please cite the above-referenced tracking number.

DB:kgc

	Location	Mailing Address	Telephone/Fax
Administration	507 N. Blount St. Raleigh, NC	4617 Mail Service Center, Raleigh 27699-4617	(919) 733-4763 • 733-8653
Restoration	515 N. Blount St. Raleigh, NC	4613 Mail Service Center, Raleigh 27699-4613	(919) 733-6547 • 715-4801
Survey & Planning	515 N. Blount St. Raleigh, NC	4618 Mail Service Center, Raleigh 27699-4618	(919) 733-4763 • 715-4801

State of North Carolina
Department of Environment
and Natural Resources
Division of Water Quality



James B. Hunt, Jr., Governor
Bill Holman, Secretary
Kerr T. Stevens, Director

December 7, 2000

MEMORANDUM

To: William D. Gilmore, P.E., Manager
NCDOT, Project Development & Environmental Analysis

Through: John Dorney, NC Division of Water Quality

From: Cynthia F. Van Der Wiele *cvd*

Subject: Scoping comments on the proposed replacement of Bridge No. 140 on US
29&70/I-85 Business over Rich Fork in Davidson County, T.I.P. Project B-4096.

This memo is in reference to your correspondence dated October 20, 2000, in which you requested scoping comments for the above project. The DWQ index number for the stream is 12-119-7 and is classified as C waters. The Division of Water Quality requests that NCDOT consider the following environmental issues for the proposed project:

- A. DWQ prefers replacement of bridges with bridges. However, if the new structure is to be a culvert, it should be countersunk to allow unimpeded fish and other aquatic organisms passage through the crossing. Please be aware that floodplain culverts are required under Nationwide 14.
- B. The document should provide a detailed and itemized presentation of the proposed impacts to wetlands and streams with corresponding mapping.
- C. There should be a discussion on mitigation plans for unavoidable impacts. If mitigation is required, it is preferable to present a conceptual (if not finalized) mitigation plan with the environmental documentation. While the NCDWQ realizes that this may not always be practical, it should be noted that for projects requiring mitigation, appropriate mitigation plans will be required prior to issuance of a 401 Water Quality Certification.
- D. When practical, the DWQ requests that bridges be replaced on the existing location with road closure. If a detour proves necessary, remediation measures in accordance with the NCDWQ requirements for General 401 Certification 2726/Nationwide Permit No. 33 (Temporary Construction, Access and Dewatering) must be followed.
- E. If applicable, DOT should not install the bridge bents in the creek, to the maximum extent practicable.
- F. Wetland and stream impacts should be avoided (including sediment and erosion control structures/measures) to the maximum extent practical. If this is not possible, alternatives

that minimize wetland impacts should be chosen. Mitigation for unavoidable impacts will be required by DWQ for impacts to wetlands in excess of one acre and/or to streams in excess of 150 linear feet.

- G. Borrow/waste areas should not be located in wetlands. It is likely that compensatory mitigation will be required if wetlands are impacted by waste or borrow.
- H. If foundation test borings are necessary: it should be noted in the document. Geotechnical work is approved under General 401 Certification Number 3027/Nationwide Permit No. 6 for Survey Activities.
- I. In accordance with the NCDWQ Wetlands Rules { 15A NCAC 2H.0506(b)(6) }, mitigation will be required for impacts of greater than 150 linear feet to any single perennial stream. In the event that mitigation becomes required, the mitigation plan should be designed to replace appropriate lost functions and values. In accordance with the NCDWQ Wetlands Rules { 15A NCAC 2H.0506 (h)(3) }, the Wetland Restoration Program may be available for use as stream mitigation.
- J. Sediment and erosion control measures should not be placed in wetlands.
- K. The 401 Water Quality Certification application will need to specifically address the proposed methods for stormwater management. More specifically, stormwater should not be permitted to discharge directly into the creek. Instead, stormwater should be designed to drain to a properly designed stormwater detention facility/apparatus.
- L. While the use of National Wetland Inventory (NWI) maps and soil surveys is a useful office tool, their inherent inaccuracies require that qualified personnel perform onsite wetland delineations prior to permit approval.

Thank you for requesting our input at this time. The DOT is reminded that issuance of a 401 Water Quality Certification requires that appropriate measures be instituted to ensure that water quality standards are met and designated uses are not degraded or lost. If you have any questions or require additional information, please contact Cynthia Van Der Wiele at (919) 733.5715.

Pc: Eric Alsmeyer, USACE Raleigh Field Office
Marella Buncick, USFWS
David Cox, NCWRC
File Copy
Central Files

Federal Aid # BRSTP-29 TIP # B-4096 County: DAVIDSON
(20)

CONCURRENCE FORM FOR PROPERTIES NOT ELIGIBLE FOR
THE NATIONAL REGISTER OF HISTORIC PLACES

Project Description:

On 5/17/2001, representatives of the

- ☒ North Carolina Department of Transportation (NCDOT)
☐ Federal Highway Administration (FHWA)
☒ North Carolina State Historic Preservation Office (SHPO)
☐ Other

reviewed the subject project at

- ☐ Scoping meeting
☒ Historic architectural resources photograph review session/consultation
☐ Other

All parties present agreed

- ☒ there are no properties over fifty years old within the project's area of potential effects.
☒ there are no properties less than fifty years old which are considered to meet Criteria Consideration G within the project's area of potential effects.
☒ there are properties over fifty years old within the project's Area of Potential Effects (APE), but based on the historical information available and the photographs of each property, the property identified as (List Attached) is considered not eligible for the National Register and no further evaluation of it is necessary. BRIDGE # 140 Thak Am Swallow 5/12/13/2001
☒ there are no National Register-listed properties within the project's area of potential effects.
☐ all properties greater than 50 years of age located in the APE have been considered at this consultation, and based upon the above concurrence, all compliance for historic architecture with Section 106 of the National Historic Preservation Act and GS 121-12(a) has been completed for this project.

Signed:

FD Davis 5/17/01
Representative, NCDOT Date

Michael C. Damm 6/4/01
FHWA, for the Division Administrator, or other Federal Agency Date

Am Swallow 5/17/01
Representative, SHPO Date

David Wood 5/17/01
State Historic Preservation Officer Date